AGEC 1114
Introduction To Agricultural Economics

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Department of Agricultural Economics
Oklahoma State University

Spring Semester, 2011

Table of Contents

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Bailey's Homepage:
http://asp.okstate.edu/baileynorwood/Misc1/default.aspx

The class website is located on Desire2Learn (D2L). Students can login to D2L at https://oc.okstate.edu/. When using D2L, be sure to use ONLY the Section # _____.

Office Hours: My formal office hours are Monday and Tuesday, 3:00-5:00 PM. However, I am often in the office and you are welcome to drop by unannounced. Students are welcome to make an appointment to meet with me, and I ask you make the appointment by emailing me (instead of phone).

Lecture Location and Times - MWF 12:30 – 1:20, AGH 101, all sections
Laboratory Location and Times - Section 1, W, 2:30 – 3:20, AGH 320
Section 2, W, 3:30-4:20, AGH 320
Section 3, TH, 2:00-2:50, AGH 320
Section 4, TH, 3:30 – 4:20, AGH 320
Section 701, TH, 10:30 – 11:20 AGH 412 (Honors Section)

Course Information: All information about the course will be recorded and organized in this workbook, though some content is provided at the D2L class website. Be sure to use Section _____ when you consult D2L. Information on class activities and assignments will be posted on both D2L and in this workbook.

Prerequisites : Math 1483 or 1513. This course employs algebra extensively.

Course Description: Economics addresses the questions: how is wealth created, and how is wealth destroyed? The study of economics can help us develop cultures, business strategies, and governmental policies amicable to social harmony. It can be quite a rewarding science, as it helps us understand very "big concepts" using simple tools. The world is a complex place, but economics simplifies it considerably. Without a good understanding of economics, reading intelligent media like *The Wall Street Journal* can be frustrating.

Course Sections: Sections 1-4 are for non-honors students and Section 701 is for honors students. The only difference between the two sections is the content of the labs. Honors students will read two novels and engage in class discussions, while non-honors students will compete in a market trading game.

Textbook: Agricultural Marketing and Price Analysis, First Edition, by Bailey Norwood and Jayson Lusk. Much of the class will follow the book closely and there will be independent readings. Please bring your textbook and workbook to every lecture and meeting with Dr. Norwood / TA.

Supplementary Materials: AGEC 1114 Workbook. All students are required to purchase the *AGEC 1114 Workbook* from the Student Union Bookstore. This book should be brought to all lectures and all labs. It contains worksheets to be used in the labs, practice questions for tests, notes, and presentations. It also contains a class planner, which I ask you to maintain diligently. When you seek the help of me or the teaching assistant, you must bring this workbook so that we can observe the your participation in the class and help you understand why you are having difficulty with certain concepts.

Supplementary Materials: Four Orange Scantron Sheets. Each three tests will be taken using orange scantron sheets sold at the university bookstore. You are responsible for having the correct scantron sheets for all tests. I ask you buy four scantrons just in case one is damaged and in case another students forgets their scantron.

Supplementary Materials for Honors Students - Students in Section 701 must obtain a copy of *The Jungle* by Upton Sinclair and *We the Living* by Ayn Rand. Any version of either book is acceptable.

Teaching Assistants: Emma Rupert is the teaching assistant, and can be reached at emma.rupert@okstate.edu. Emma took the course two years ago and was a TA last semester. Although she has a towering intellect and is knowledgeable of economics, she has not studied economics for as many years as Dr. Norwood, so she is *not expected to know the answer to everything*. Instead, she is someone who can answer many questions and help you think through the questions she has not perfected. **At no point should you ever behave rudely to Emma. Anything other than respect and kindness towards Emma will result in you being asked to drop the class. Emma is a kind, hard working person. She deserves and will receive your respect.** I will ask Emma to hold office hours the night before an exam, but I do not want her to hold "review sessions". Every class we have is a review session, and I purposely design the course to reward students who study the material regularly.

Emma's office hours: _____ in AGH 419.

Grading: You will be graded according to a variety of activities. There will be three tests, each compromising 20% of your grade. The class paper will comprise another 20%, homeworks will count 5% of your grade, and your performance in laboratory assignments will count 15%. Although homeworks do not count for much, they prepare you well for exams.

Composition of Final Grade

Exam 1 – 20%	Class Paper – 20%
Exam 2 – 20%	Homeworks – 5%
Exam 3 (final) – 20%	Lab Grade – 15%

Letter Grades: The criteria for achieving a letter grade is shown in the below table. The class is not graded on a "bell shaped curve" nor are their curves on tests or the final numerical grade. If every student in the class has a final numerical grade of 90 or above, every student will receive an A. Final grades will be rounded such that the percentage contains no decimal places. This means that if you have a final numerical grade of 89.45%, this rounds up to 90%, and you receive an A.

Letter Grade	Numerical Grade
A	≥ 90%
B	< 90%, ≥ 80%
C	< 80%, ≥ 70%
D	< 70%, ≥ 60%
F	< 60%

To make sure you understand how final grades are calculated, the final numerical grade goes by the following formula:

Final Numerical Grade = (0.20)(Exam 1 grade) + (0.20)(Exam 2 grade) + (0.20)(Exam 3 or final grade) + (0.05)(average homework grade, not including the lowest two homework grades) + (0.20)(paper grade)+(0.15)(lab grade based on profits earned)

Examinations: The final is not comprehensive. You are responsible for consulting me beforehand if you need to take the test at a different time than your classmates. Students who arrange to take the exam at a different time will be given a different exam dominated by essay questions. Only death, court summons, or significant sickness/injury are excuses for missing tests, and I will require documentation of such. Of course, I will accommodate all disabilities to the extent that the university requires me to.

Homeworks: Because the homeworks are online and you may drop the two lowest homework grades, you are not allowed to makeup a homework. All homeworks will be given in the *Quizzes* portion of D2L and automatically graded by D2L. I have never known D2L to make a mistake. If for some reason you think you completed the homework but D2L claims you didn't, I am almost guaranteed to believe D2L over you. Do not take this personally—students regularly lie to me about things I can verify, after which they concede their dishonesty. Students cannot wait until the end of the semester to claim problems with D2L. If you believe something is in error about D2L, it must be noted immediately. **You should know that D2L records everything you do in D2L. I can tell if you logged into D2L or not, and every semester I have a few students who swear they did the quiz online, but when I check they never even logged into D2L (they later admit to lying).**

Laboratory Assignments (Non-Honors Students): Students will be assigned to two-person teams where they participate in a game where they buy and sell hypothetical profits to make money. In the lab, we create our own economy, and I use this lab to demonstrate how an economy works. Students will be graded almost exclusively on the profits they earn. Each team's profits will be compared to the profits of all other teams in *all* sections. The team with the lowest profits will receive a grade of 70, the team with the highest profits will receive a grade of 100, and all other grades will be assigned according to student performance relative to the best and worst teams. I will adjust some students profits to rectify obstacles in which the students have no choice over. I will take attendance in the labs, but not by assigned seating, so sit anywhere you like. Each student will have the opportunity to evaluate their teammate's performance. Students who are rated poorly and attend class infrequently will receive a failing grade. If you are to be absent, please contact your team member and make sure they will cover for you. **Do not contact Dr. Norwood or the TAs if you will be absent from labs.** At the end of each lab I will present an interesting economic fact. You are required to understand these facts on homeworks, quizzes, and exams.

Laboratory Assignments (Honors Students): Instead of trading during labs, honors students will read *The Jungle* by Upton Sinclair and *We the Living* by Ayn Rand, and participate in lab discussions about the books. Honors students may be given additional questions on exams regarding their readings.

Life-Financial-Plan Paper: Each student will write a paper where they plan their financial future. Students will use an online financial planner which Dr. Norwood created to project their financial future from the time they graduate until their time of death. This planner will help you understand useful suggestions for daily life, such as the percent of income you should save for retirement and how one should invest their savings for retirement. All information regarding the paper can be found at http://asp.okstate.edu/baileynorwood/Survey5/Default.aspx.

But what is the class "like"? How hard is the class? The class is challenging but not unreasonably hard. **Every class is a review session for the next test**, in that we only study material that will be on tests and we work on questions very similar to subsequent test questions. Hence, if you keep up with class you will know what will be on the test. Because each class is a review session for the next test, no review sessions the night before the class are held. I do this deliberately to reward students who regularly participate and keep up with class. So long as you regularly attend class, study a little on the side, complete all homeworks, and study diligently before

the test you should have no trouble passing the class. Those who work particularly hard on a *regular* basis will likely receive an A or B. Students who tend to ignore class until the night before the test almost always fail.

Absences in Lectures: I do not take attendance in lectures, so there is no need to tell me if you will be absent. **Please do not inform me if you will be absent for a lecture (or a lab).** The class schedule information we record in this workbook is also posted on D2L, so you may refer to D2L if you miss a class.

Posting of Grades: To view your grades follow the following steps. Go to the *Grades* section in D2L and find your unique ID number where you would normally find grades. Then find the spreadsheet *AGEC 1114 Grades* in the *Grades* module. In this spreadsheet your grades are in the row containing your unique ID number. I do not post grades in D2L because errors sometimes arise when importing grades into D2L.

Important Dates

January 10 – Class begins	March 21 – Life-Financial-Plan Paper due
January 17 – University holiday	March 25 – Exam 2
January 18 – Last day to drop class with full refund and no grade	April 8 – Last day to drop course with automatic W grade
January 21 – Last day to drop class with 50% refund and W grade	April 25-19 - Dead Week
February 16 – Exam 1	May 2 (Monday) 10:00-11:50 AM - Class Final, in regular classroom
February 22 – Six week grades due	May 10 – Grades due
March 14-18 Spring Break	

Note: The final will indeed be given May 2, with no opportunities to take the final exam earlier.

Beginning Class: Each class begins with me posting announcements and the planned class activities. These should be recorded in your workbook before class begins. After this, always be ready to take class notes and turn to the announced page in the workbook or book. To reinforce the extent to which I care about you, and my deep, sincere love for learning, each class will begin with the following chant.

Bailey: Who cares about you?
Class: Dr. Norwood!
Bailey: Why does he care?
Class: We are special!
Bailey: Why do we learn?
Class: For the sake of learning!

Ending Class: Students have a tendency to be disruptive towards the end of class, so I have created a custom indicating when the class has ended. I ask you not to begin packing your books until this custom occurs. The first custom is to record in our class planner the activities we accomplished, and the second is to chant the following.

Bailey: What is capitalism?
Class: Freedom!
Bailey: How does a person become rich?
Class: By making all others rich!
Bailey: What is the primary difference between rich and poor countries?
Class: Freedom and knowledge!

The university wishes me to ask you to also read a syllabus attachment which can be found at http://osu.okstate.edu/acadaffr/aa/PDF%20Files/sylatspr.pdf

Additional Items Provided in Class.

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

Student Information Sheet

My Question	Your Answer
Your Name	
Class (e.g. freshman, sophomore)?	
Hometown?	
Major?	
How many hours do you currently work per week?	
What are your hobbies and interests?	
What are your career aspirations (if any)?	
What is your favorite song and artist that you are currently listening to (not favorite of all time)?	
What is your favorite television show that you are currently watching?	
What is your favorite book?	
What is your political affiliation? (e.g. Democrat, Republican, Libertarian)	
What are your parents' occupations?	
Do you have an agricultural background? If so, what?	

Monday, Jan 10

Announcements:

Planned Class Activities:

Activities Accomplished:

Wednesday, Jan 12

Announcements:

Planned Class Activities:

Activities Accomplished:

Friday, Jan 14

Announcements:

Planned Class Activities:

Activities Accomplished:

Monday, Jan 17 (No Class: MLK day)

Announcements:

Planned Class Activities:

Activities Accomplished:

Wednesday, Jan 19

Announcements:

Planned Class Activities:

Activities Accomplished:

Friday, Jan 21

Announcements:

Planned Class Activities:

Activities Accomplished:

Monday, Jan 24

Announcements:

Planned Class Activities:

Activities Accomplished:

Wednesday, Jan 26

Announcements:

Planned Class Activities:

Activities Accomplished:

Friday, Jan 28

Announcements:

Planned Class Activities:

Activities Accomplished:

Monday, Jan 31

Announcements:

Planned Class Activities:

Activities Accomplished:

Wednesday, Feb 2

Announcements:

Planned Class Activities:

Activities Accomplished:

Friday, Feb 4

Announcements:

Planned Class Activities:

Activities Accomplished:

Monday, Feb 7

Announcements:

Planned Class Activities:

Activities Accomplished:

Wednesday, Feb 9

Announcements:

Planned Class Activities:

Activities Accomplished:

Friday, Feb 11

Announcements:

Planned Class Activities:

Activities Accomplished:

Monday, Feb 14

Announcements:

Planned Class Activities:

Activities Accomplished:

Wednesday, Feb 16

Announcements:

Planned Class Activities:

Activities Accomplished:

Friday, Feb 18

Announcements:

Planned Class Activities:

Activities Accomplished:

Monday, Feb 21

Announcements:

Planned Class Activities:

Activities Accomplished:

Wednesday, Feb 23

Announcements:

Planned Class Activities:

Activities Accomplished:

Friday, Feb 25

Announcements:

Planned Class Activities:

Activities Accomplished:

Monday, Feb 28

Announcements:

Planned Class Activities:

Activities Accomplished:

Wednesday, Mar 2

Announcements:

Planned Class Activities:

Activities Accomplished:

Friday, Mar 4

Announcements:

Planned Class Activities:

Activities Accomplished:

Monday, Mar 7

Announcements:

Planned Class Activities:

Activities Accomplished:

Wednesday, Mar 9

Announcements:

Planned Class Activities:

Activities Accomplished:

Friday, Mar 11

Announcements:

Planned Class Activities:

Activities Accomplished:

Monday, Mar 14 (No Class: Spring Break)

Announcements:

Planned Class Activities:

Activities Accomplished:

Wednesday, Mar 16 (No Class: Spring Break)

Announcements:

Planned Class Activities:

Activities Accomplished:

Friday, Mar 18 (No Class: Spring Break)

Announcements:

Planned Class Activities:

Activities Accomplished:

Monday, Mar 21

Announcements:

Planned Class Activities:

Activities Accomplished:

Wednesday, Mar 23

Announcements:

Planned Class Activities:

Activities Accomplished:

Friday, Mar 25

Announcements:

Planned Class Activities:

Activities Accomplished:

Monday, Mar 28

Announcements:

Planned Class Activities:

Activities Accomplished:

Wednesday, Mar 30

Announcements:

Planned Class Activities:

Activities Accomplished:

Friday, April 1

Announcements:

Planned Class Activities:

Activities Accomplished:

Monday, April 4

Announcements:

Planned Class Activities:

Activities Accomplished:

Wednesday, April 6

Announcements:

Planned Class Activities:

Activities Accomplished:

Friday, April 8 (Last day to drop course)

Announcements:

Planned Class Activities:

Activities Accomplished:

Monday, April 11

Announcements:

Planned Class Activities:

Activities Accomplished:

Wednesday, April 13

Announcements:

Planned Class Activities:

Activities Accomplished:

Friday, April 15

Announcements:

Planned Class Activities:

Activities Accomplished:

Monday, April 18

Announcements:

Planned Class Activities:

Activities Accomplished:

Wednesday, April 20

Announcements:

Planned Class Activities:

Activities Accomplished:

Friday, April 22

Announcements:

Planned Class Activities:

Activities Accomplished:

Monday, April 25 (pre-finals week)

Announcements:

Planned Class Activities:

Activities Accomplished:

Wednesday, April 27 (pre-finals week)

Announcements:

Planned Class Activities:

Activities Accomplished:

Friday, April 29 (pre-finals week)

Announcements:

Planned Class Activities:

Activities Accomplished:

May 2 – 10 Finals Week

Our final will be held Monday, May 2, 10:00-11:50 AM, in normal classroom.

First of Three Sheets for Every Lab

Date: January 12 or 13, 2010

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

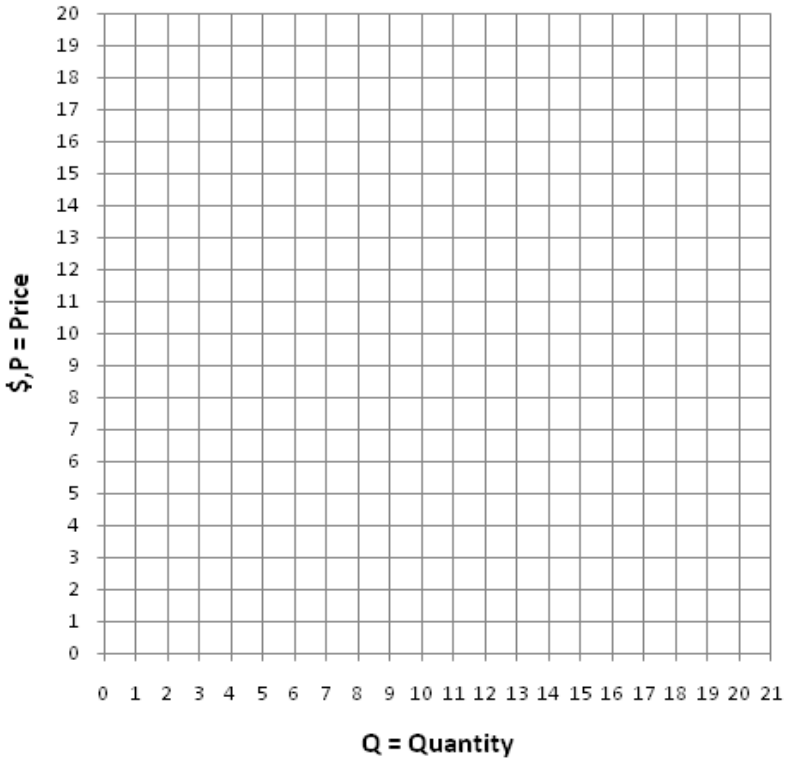
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

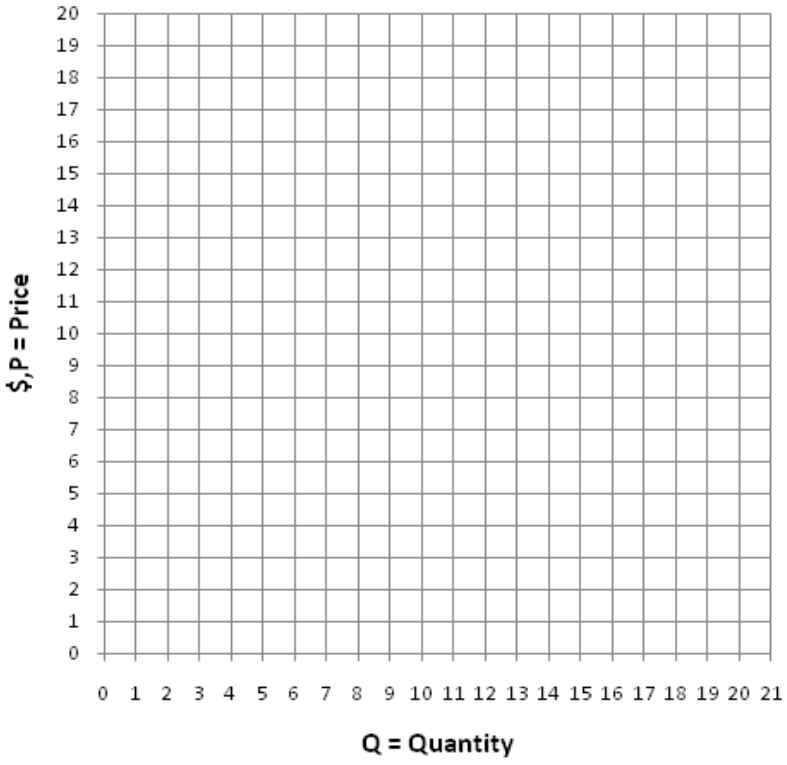
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: January 19 or 20, 2010

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

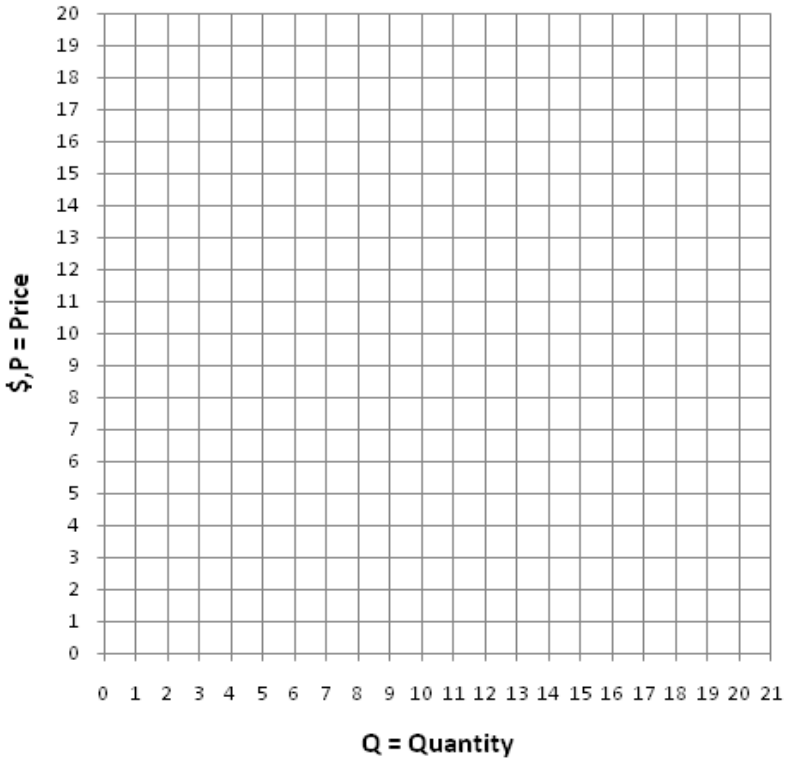
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

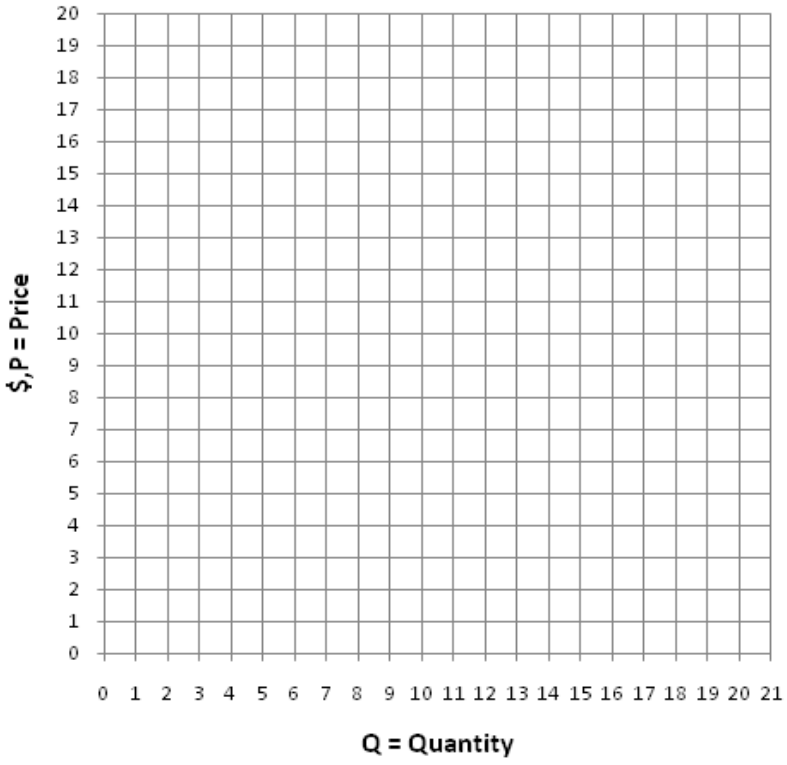
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: January 26 or 27, 2010

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

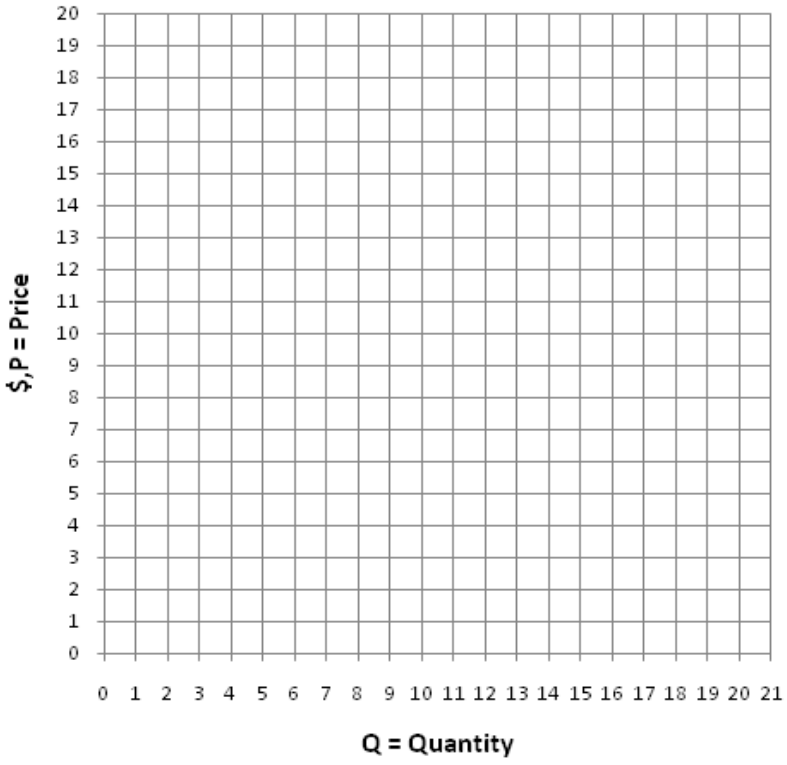
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

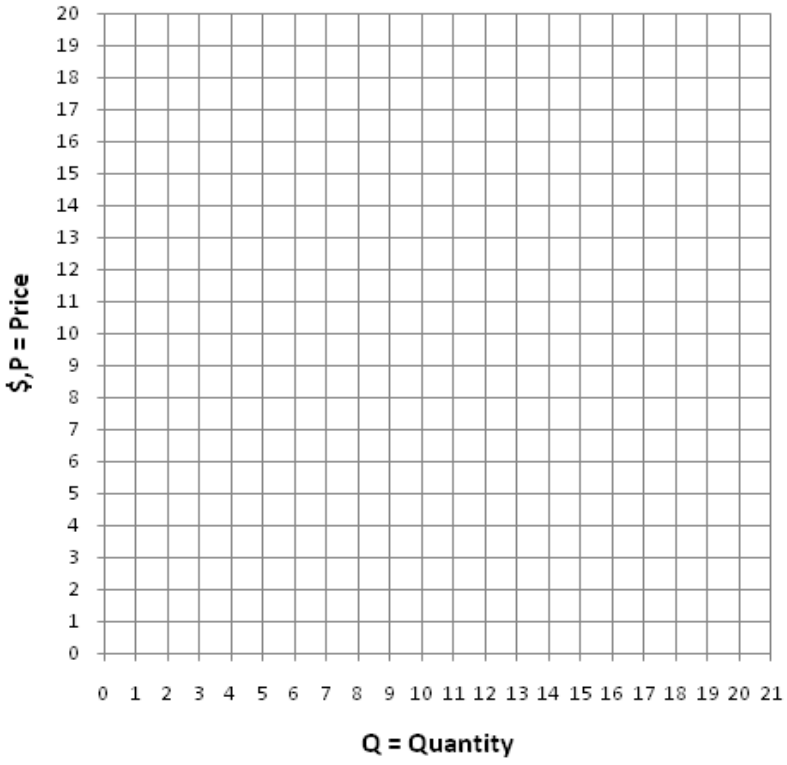
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: February 2 or 3, 2010

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

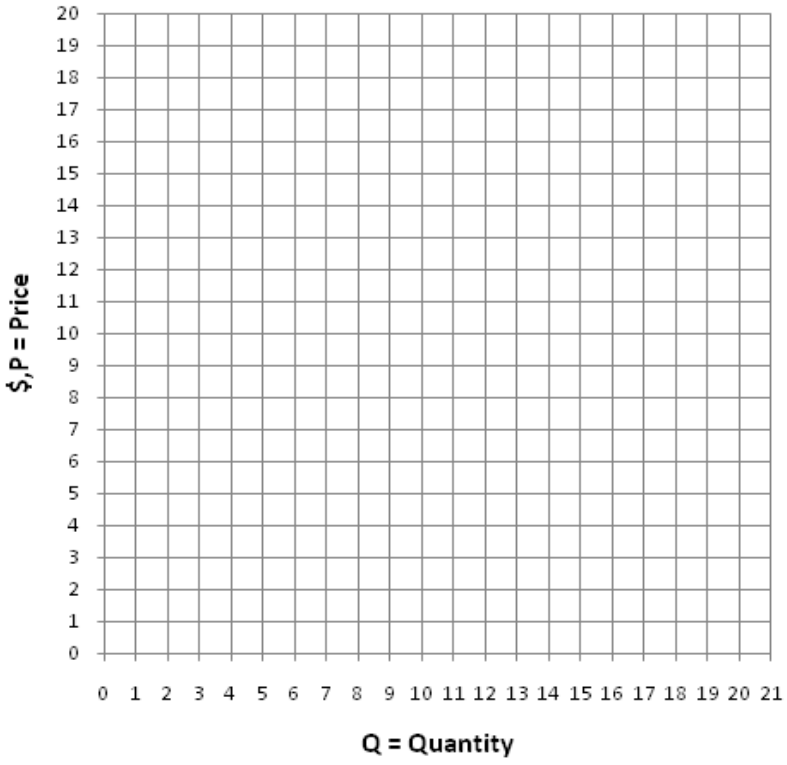
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

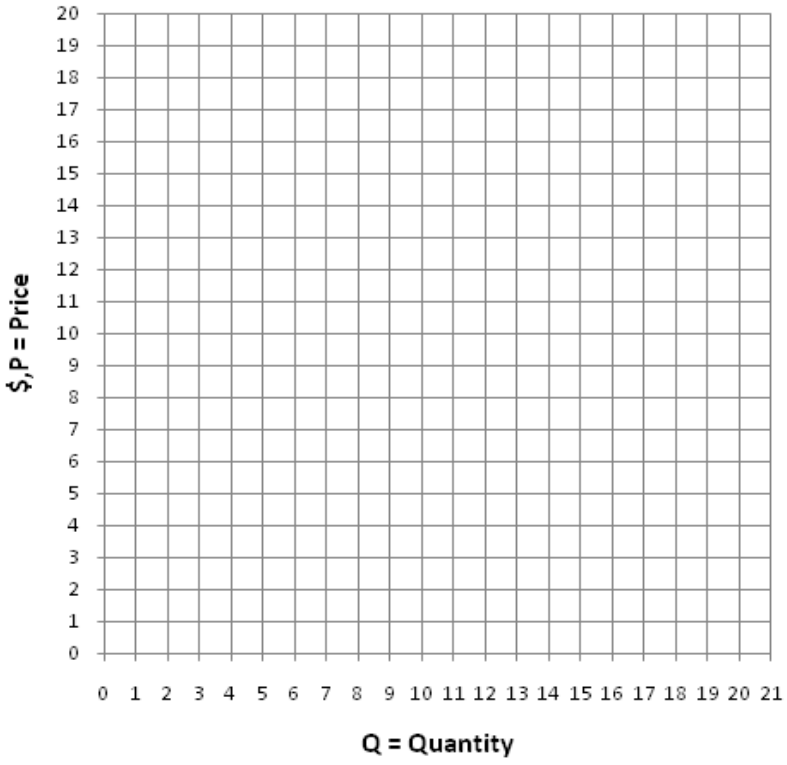
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: February 9 or 10, 2010

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

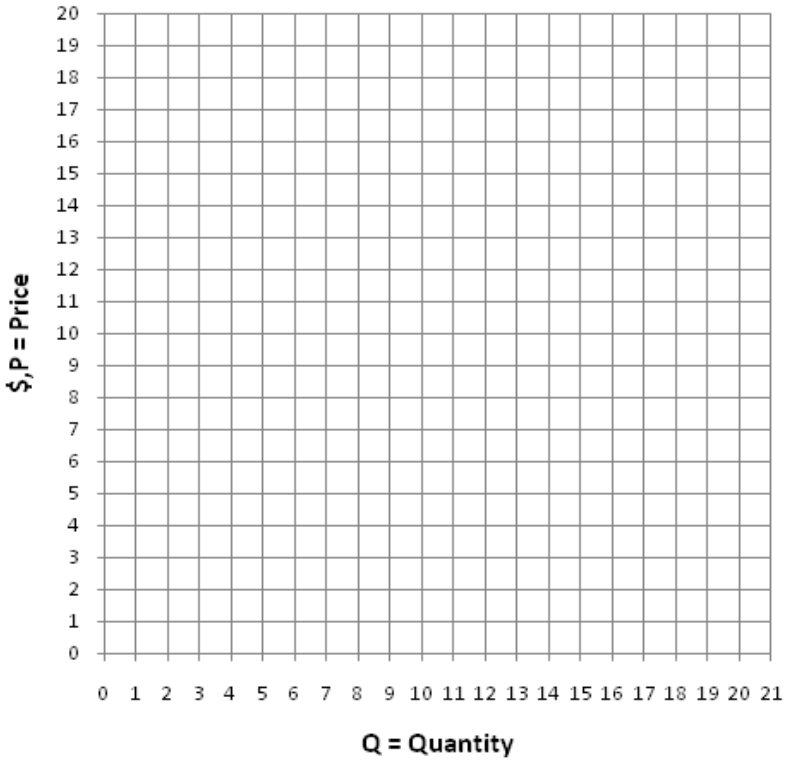
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

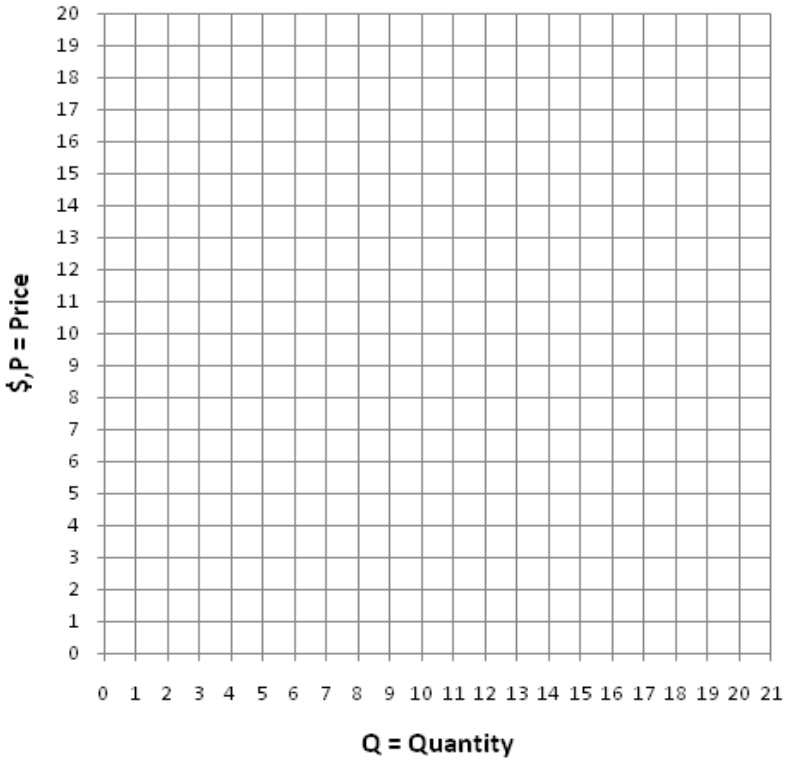
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: February 16 or 17, 2010

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

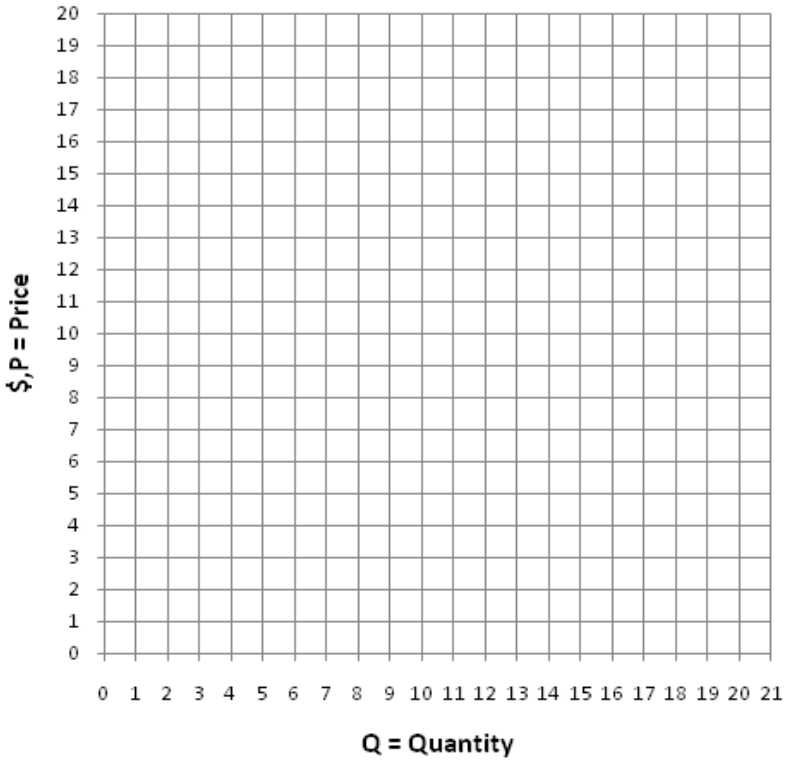
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

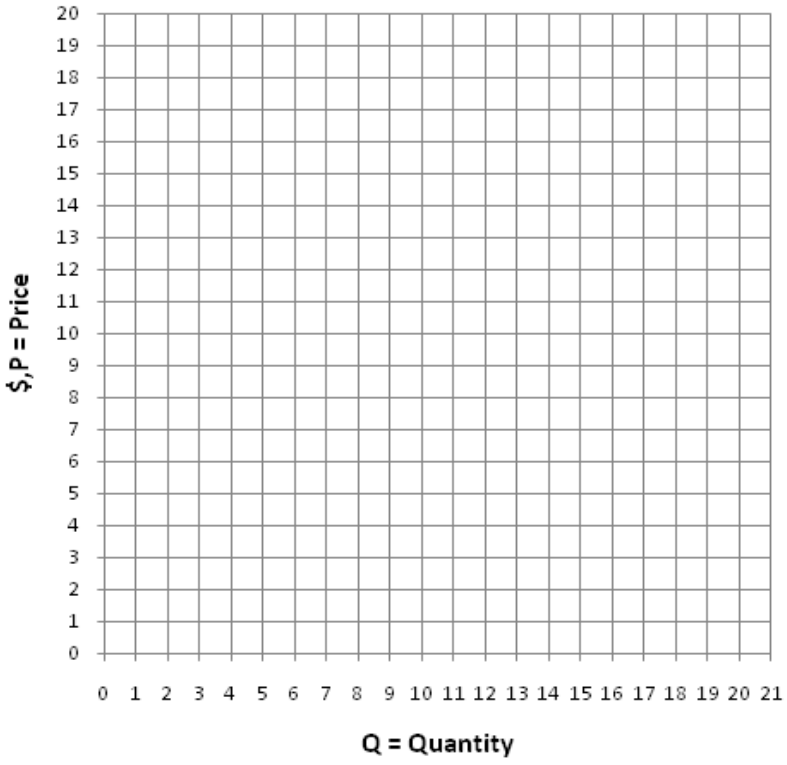
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: February 23 or 24, 2010

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

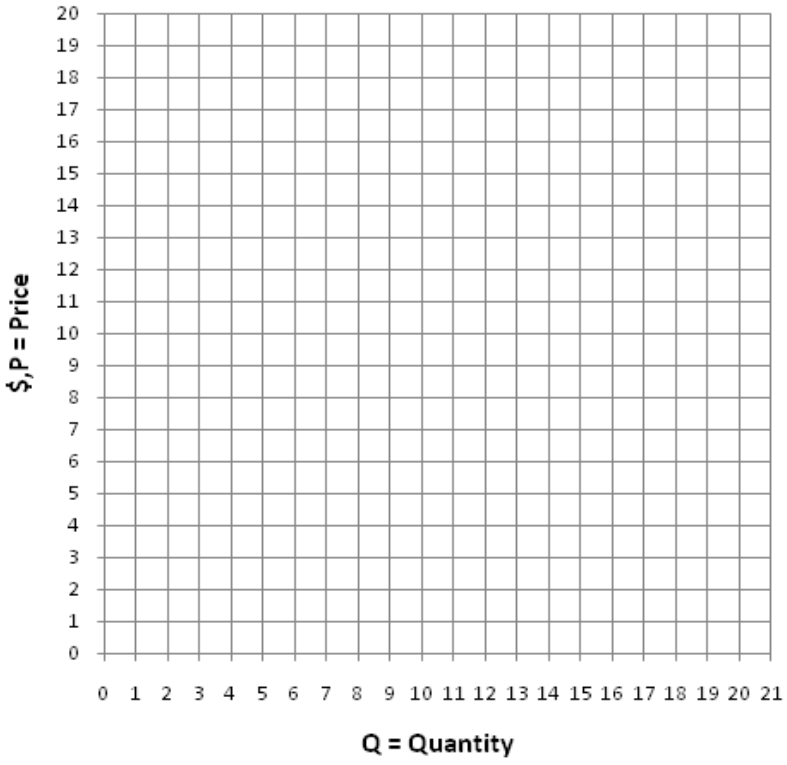
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

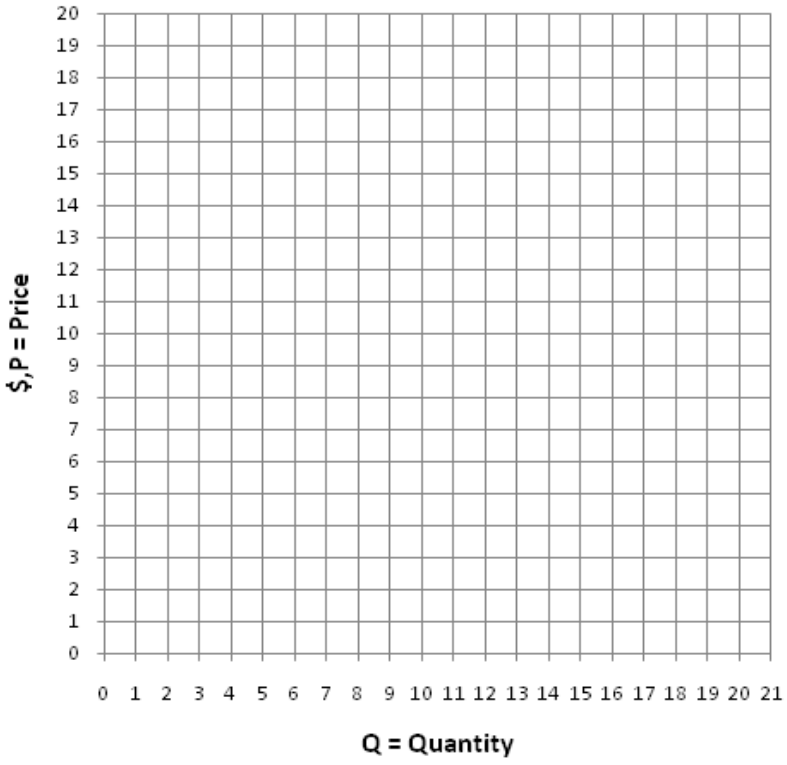
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: March 2 or 3, 2010

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

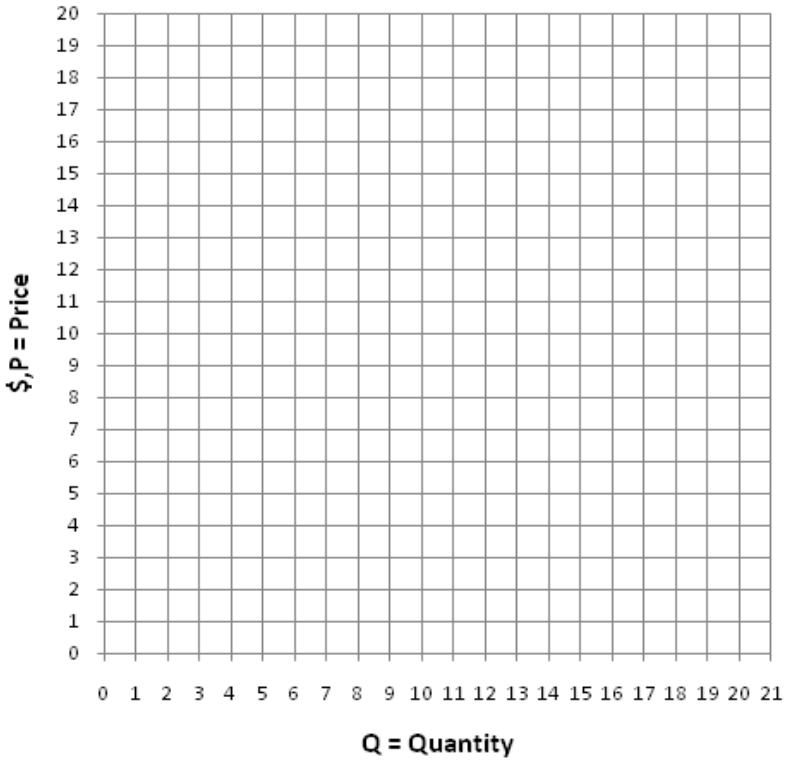
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

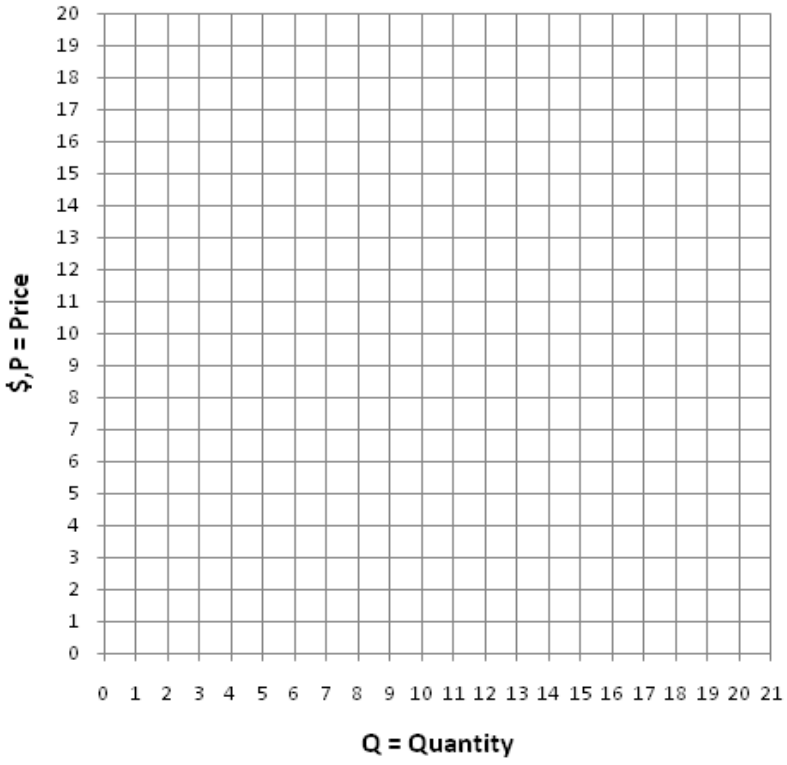
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: March 9 or 10, 2010

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

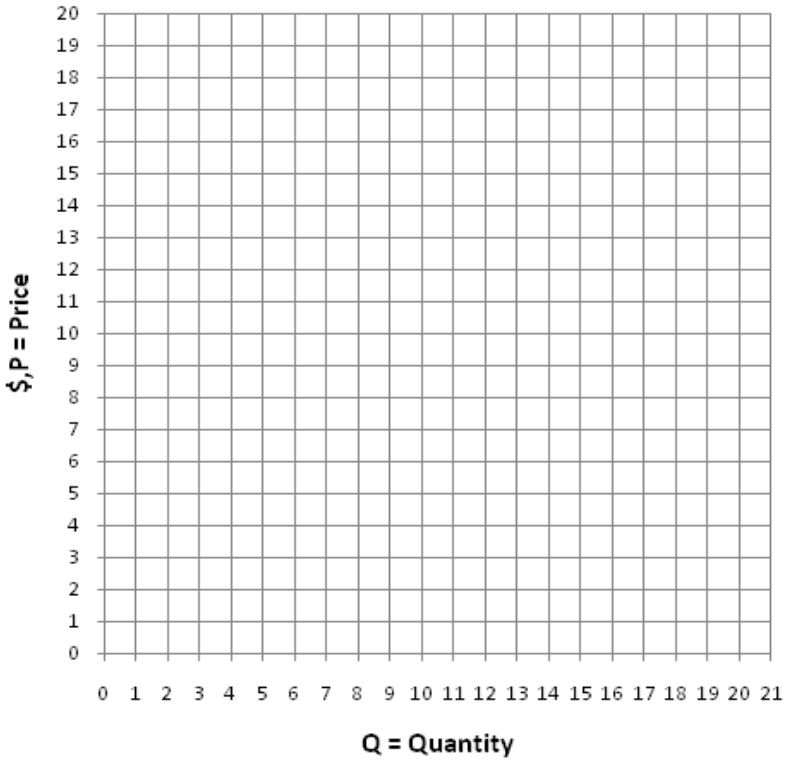
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

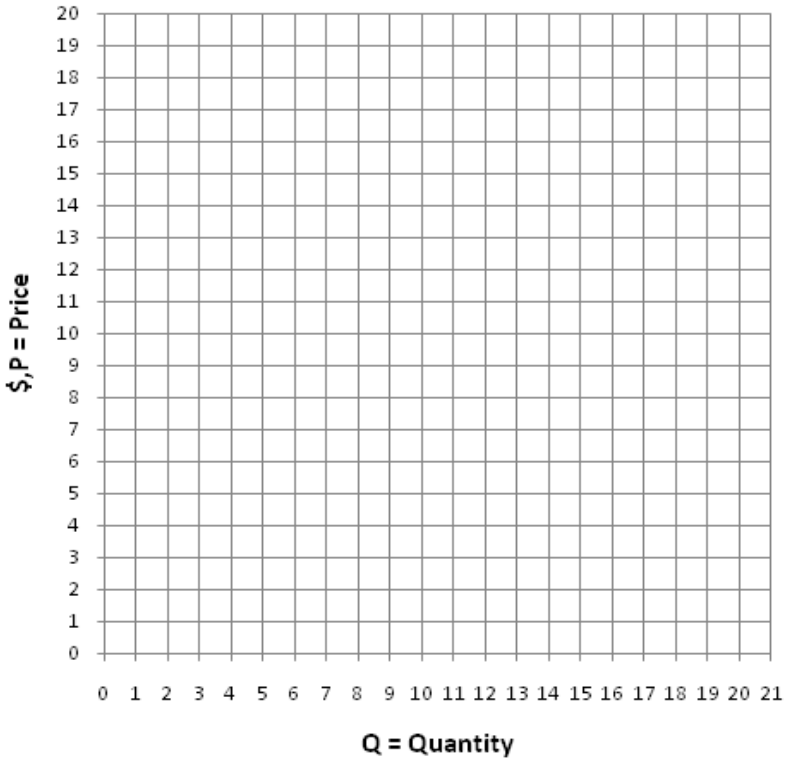
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: March 16 or 17, 2010

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

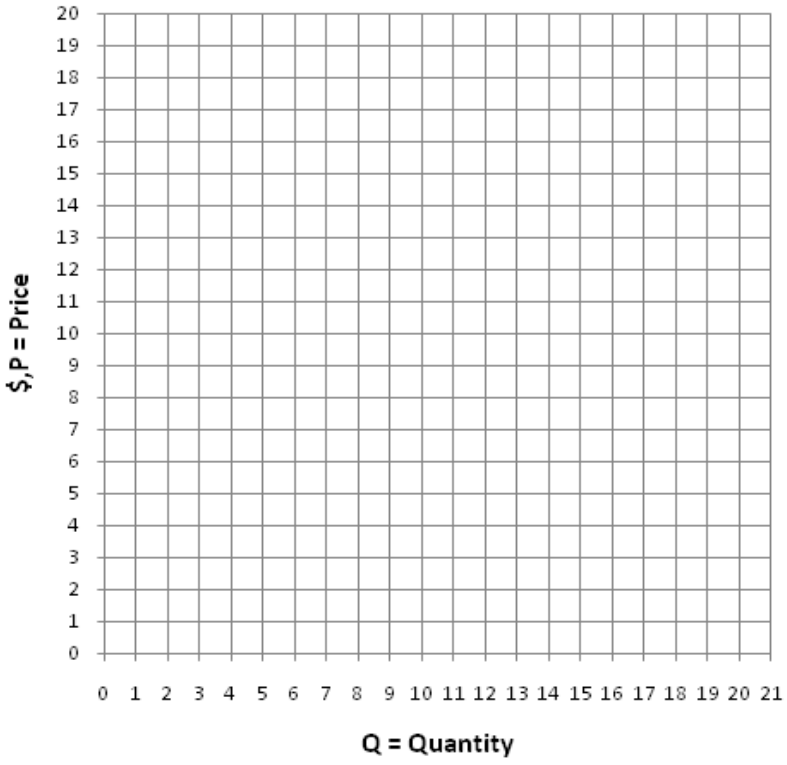
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

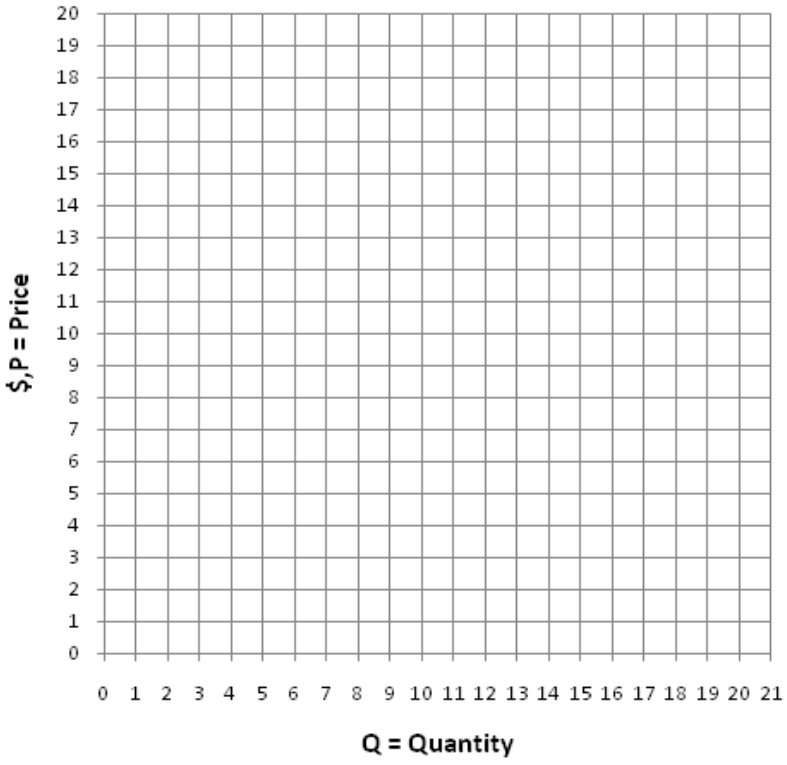
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: March 23 or 24, 2010

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

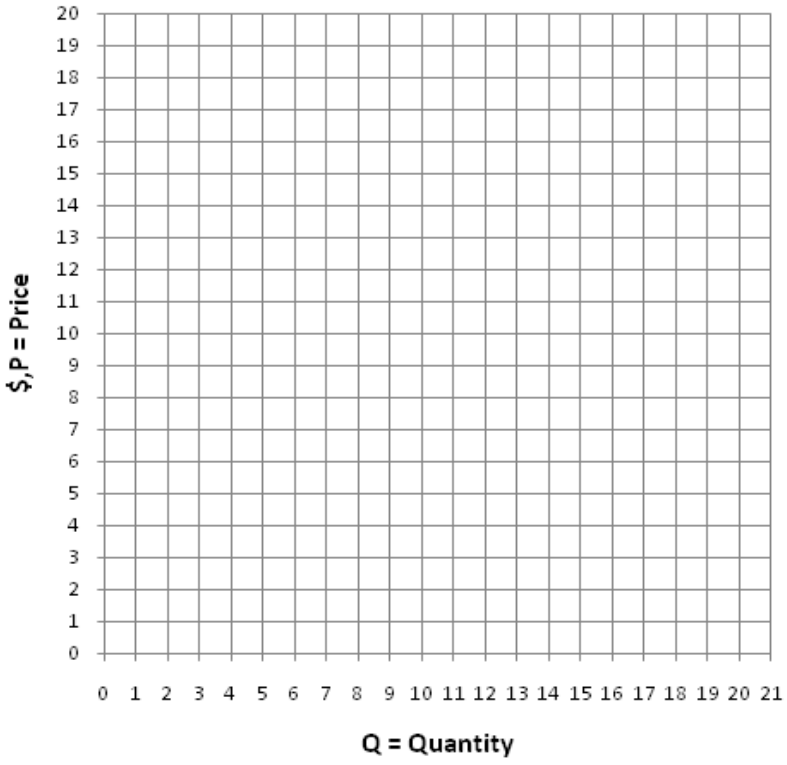
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

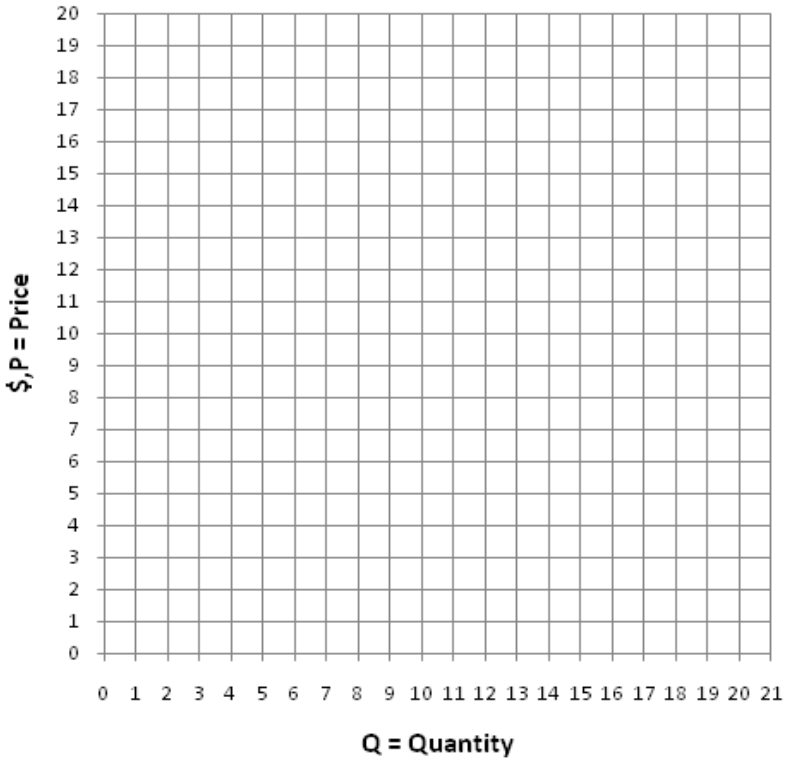
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: March 30 or 31, 2010

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

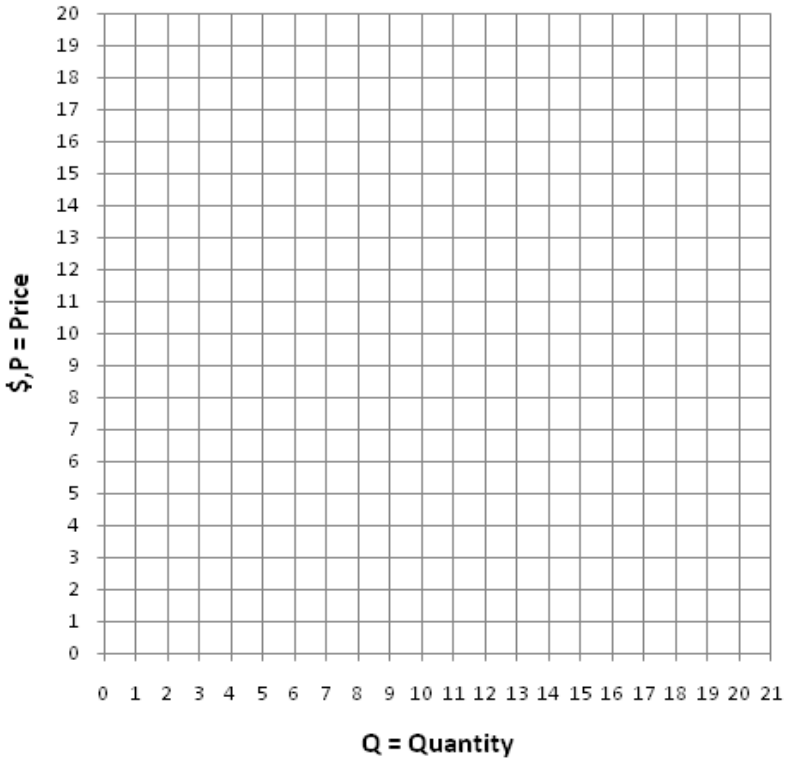
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

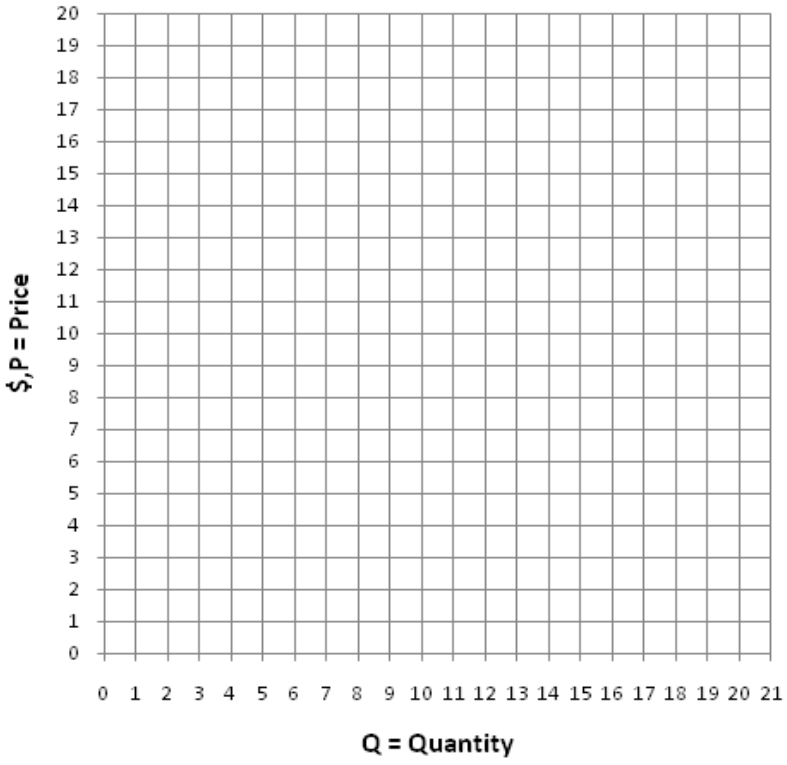
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: April 6 or 7, 2010

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

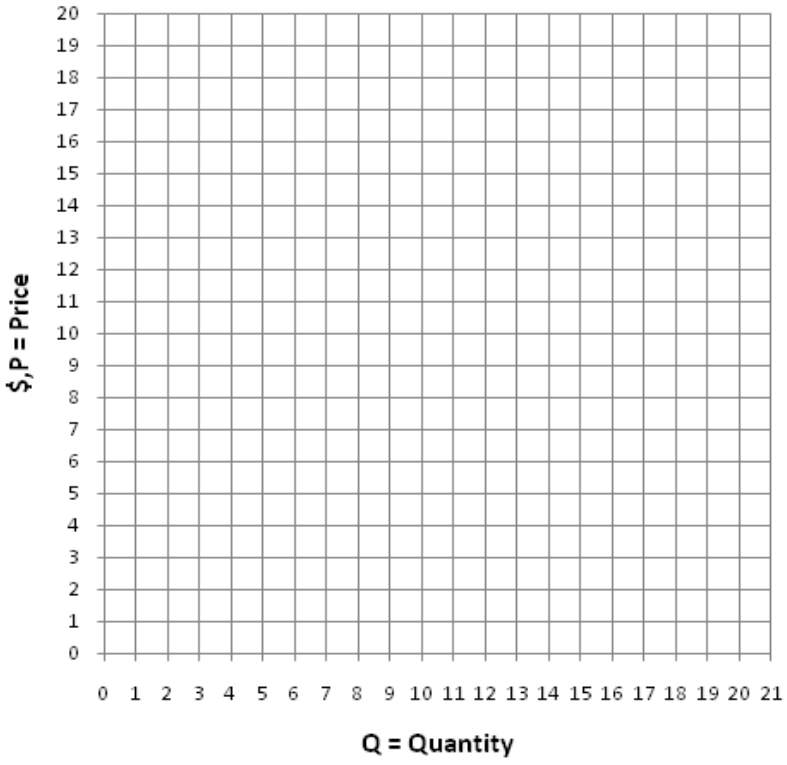
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

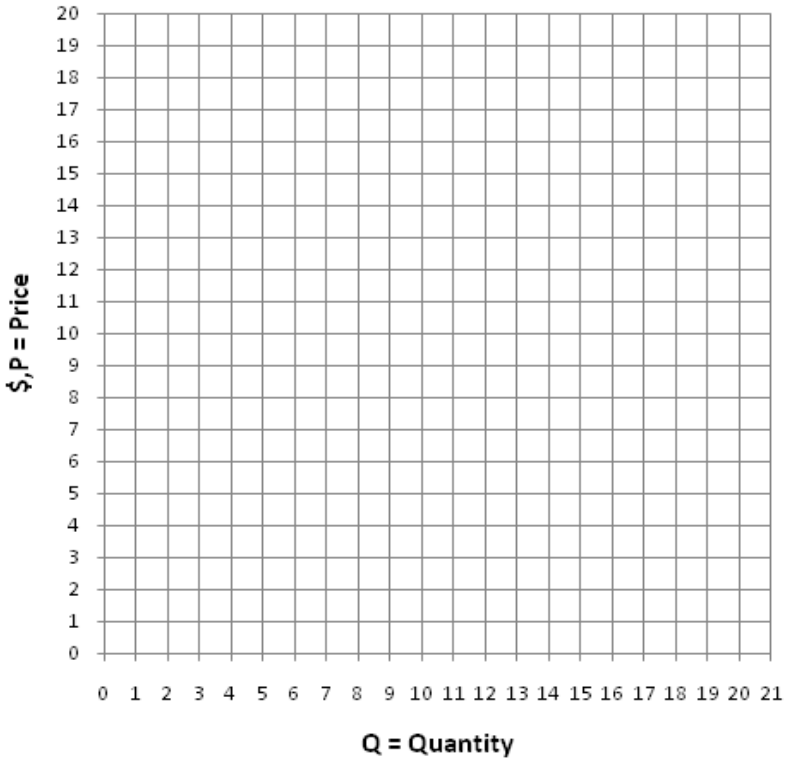
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: April 13 or 14, 2010

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

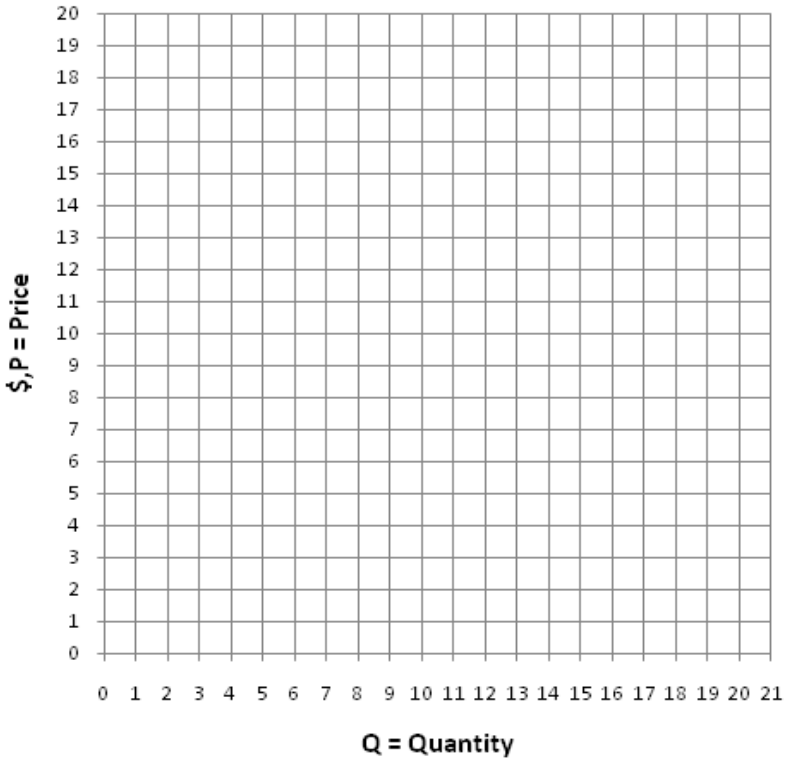
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

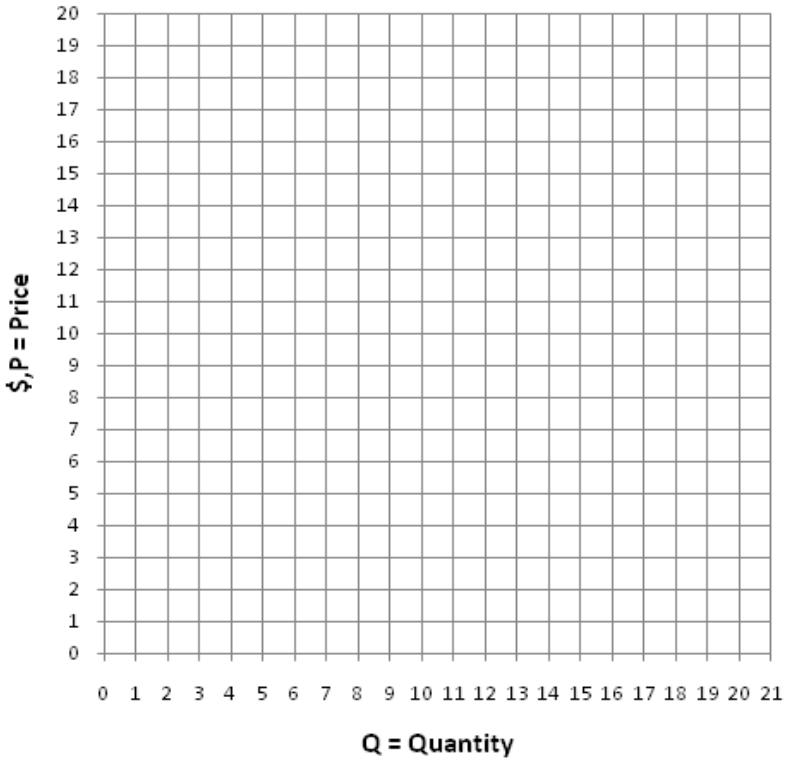
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: April 20 or 21, 2010

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

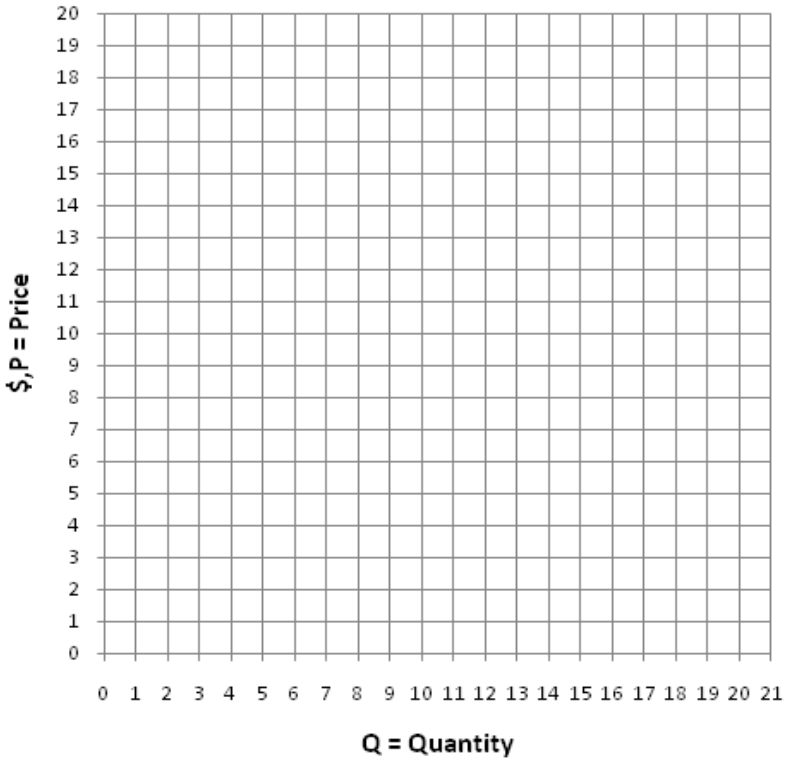
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

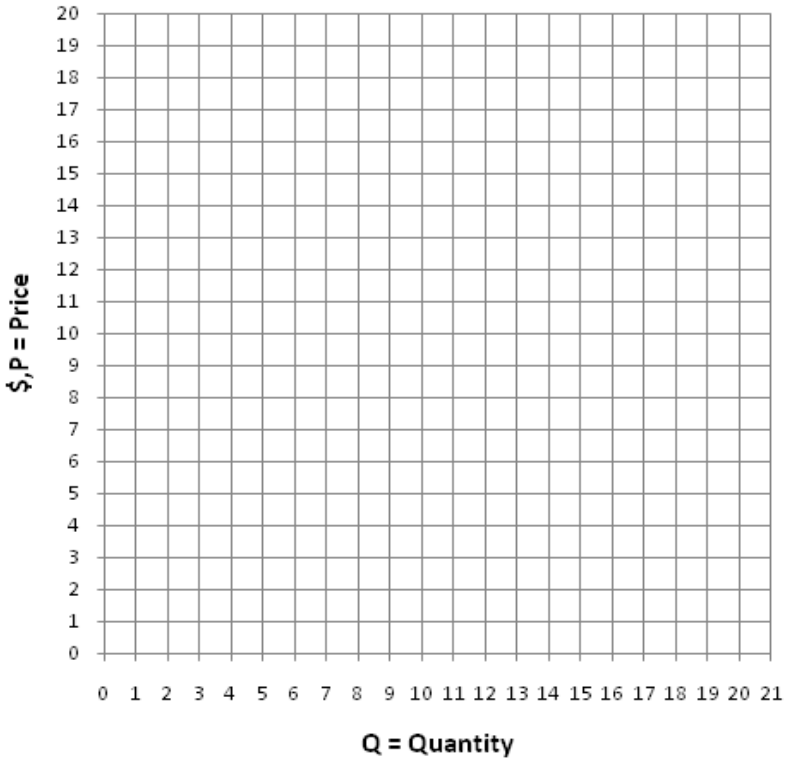
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: April 27 or 28, 2010

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

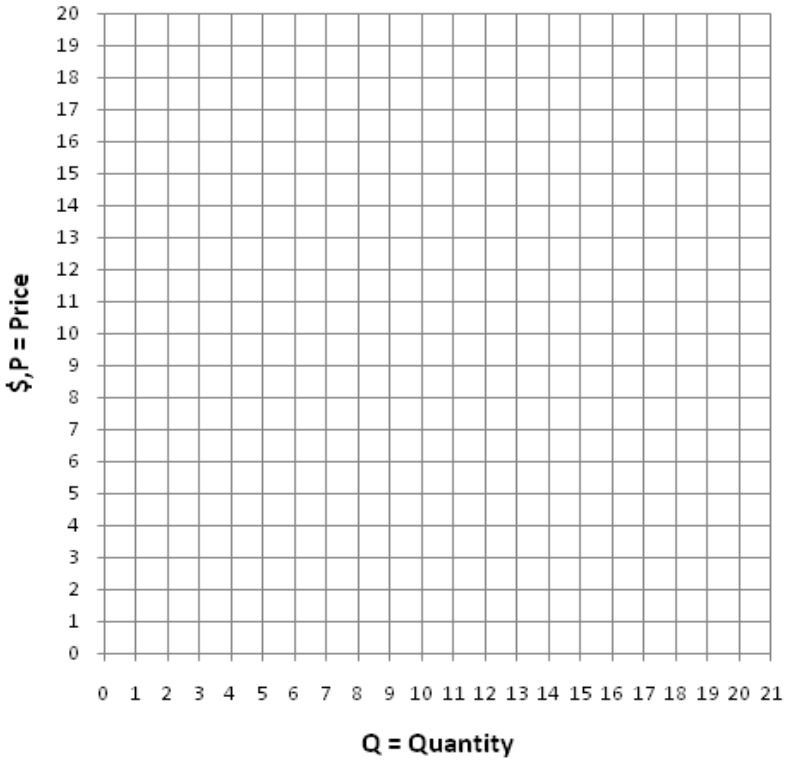
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

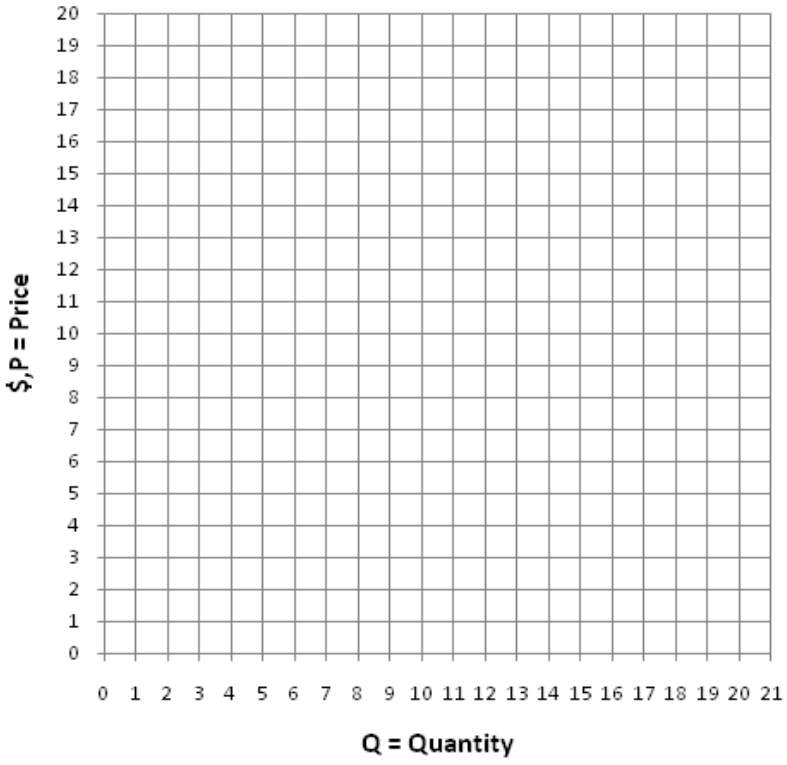
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: May 4 or 5, 2010

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

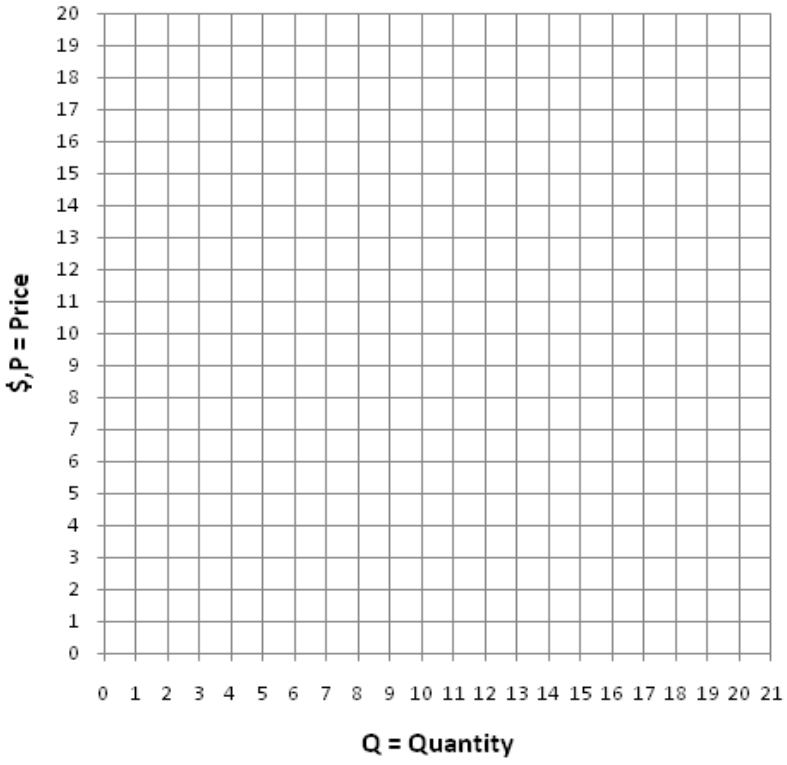
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

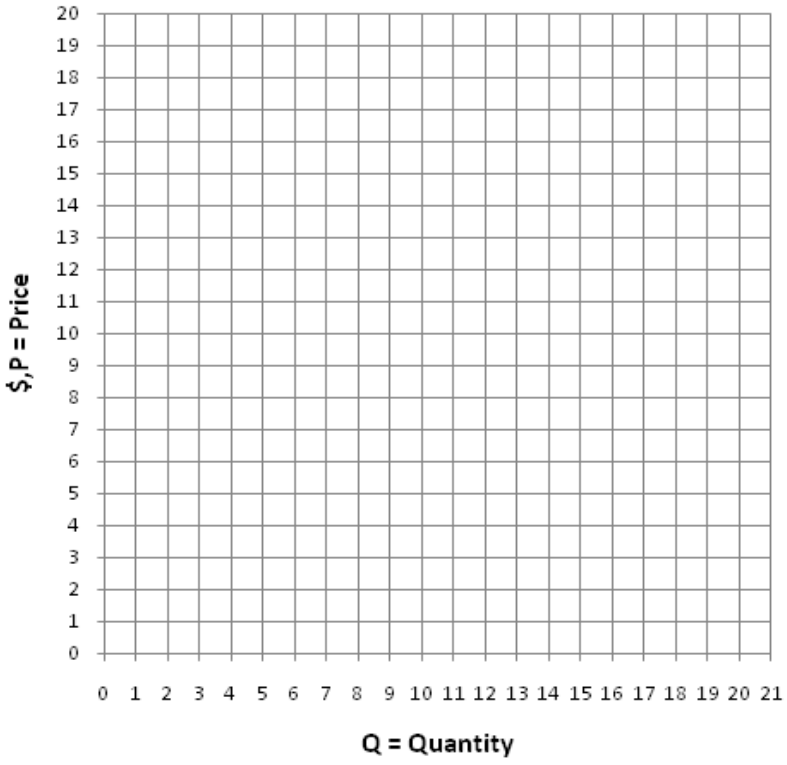
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: Extras

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

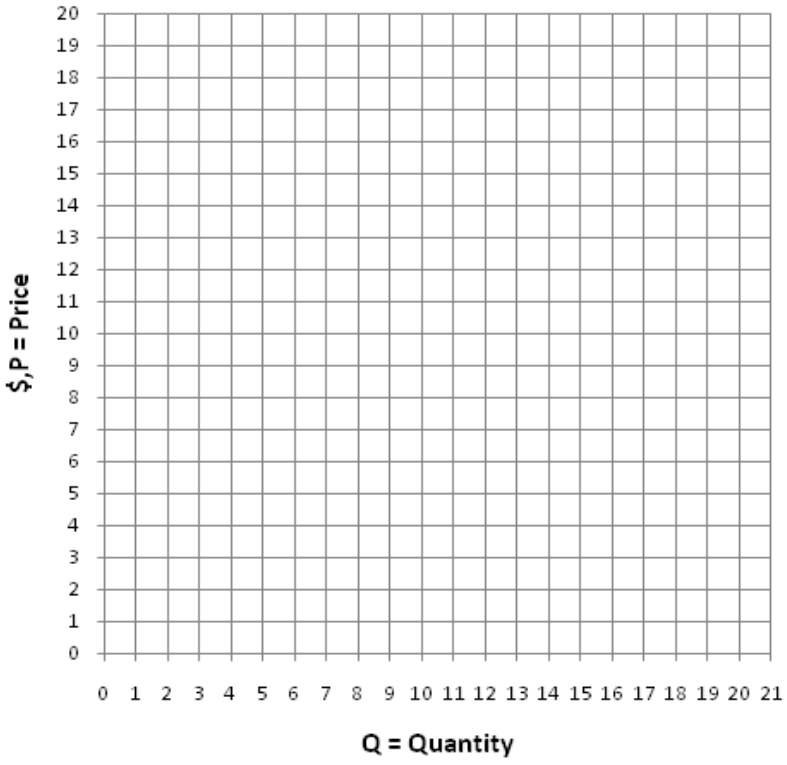
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

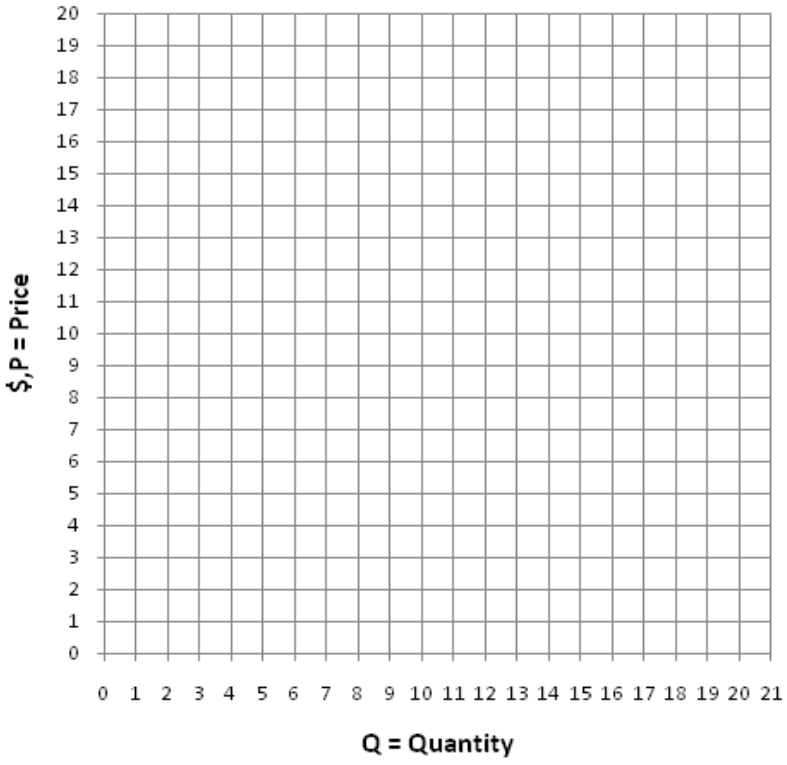
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: Extras

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

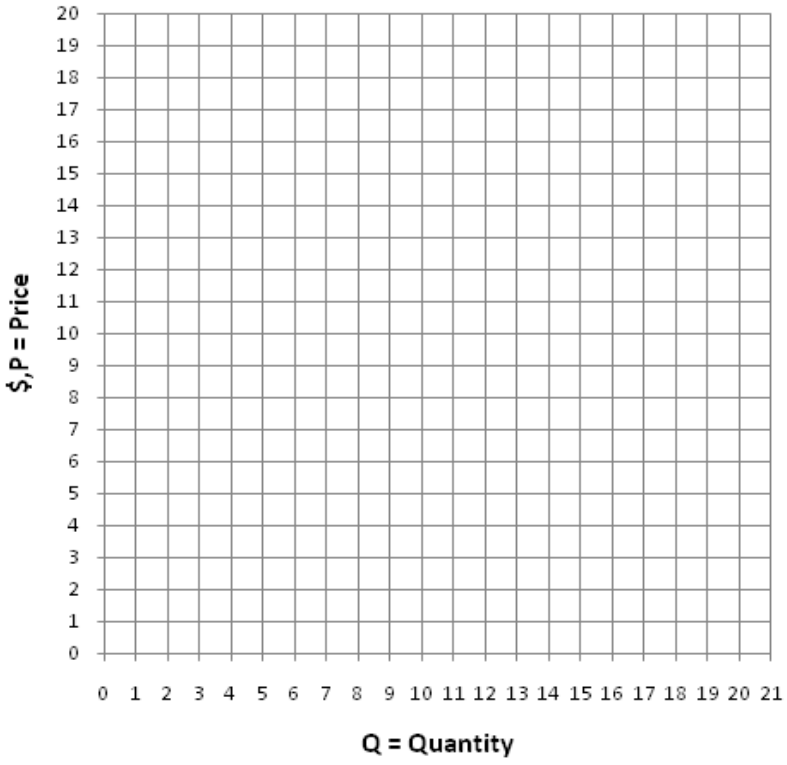
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

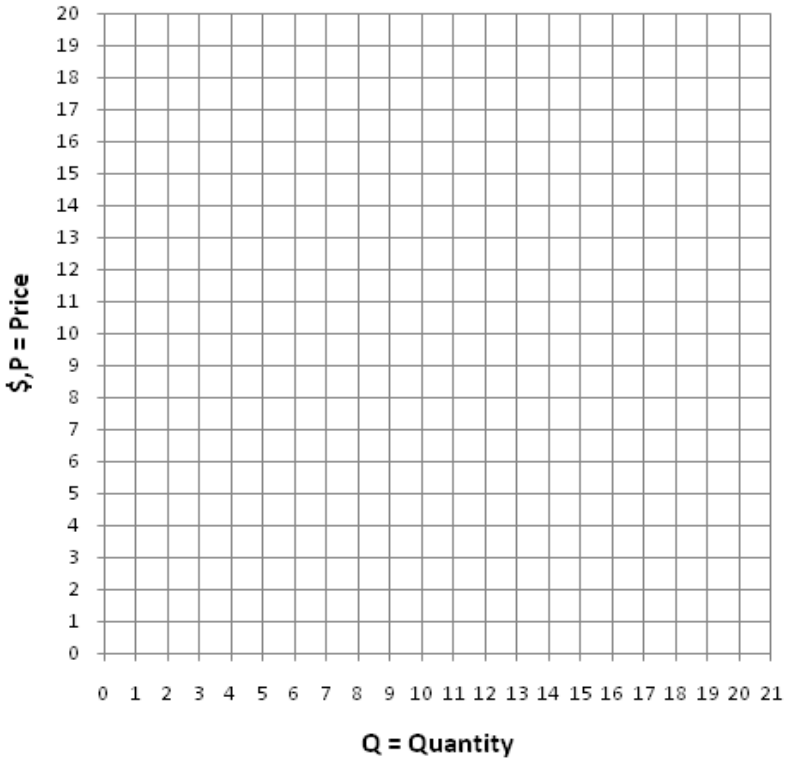
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: Extras

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

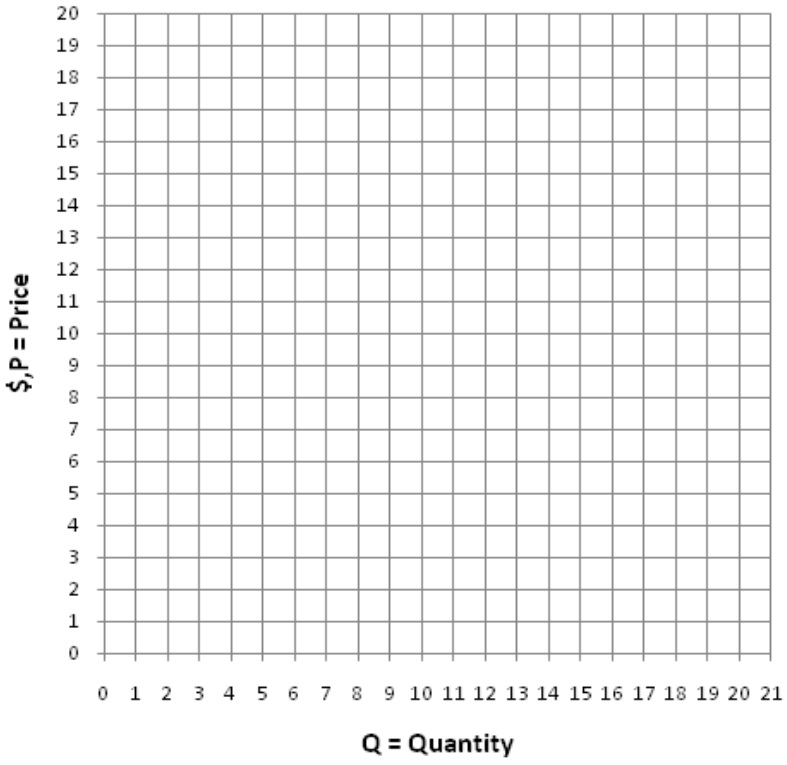
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

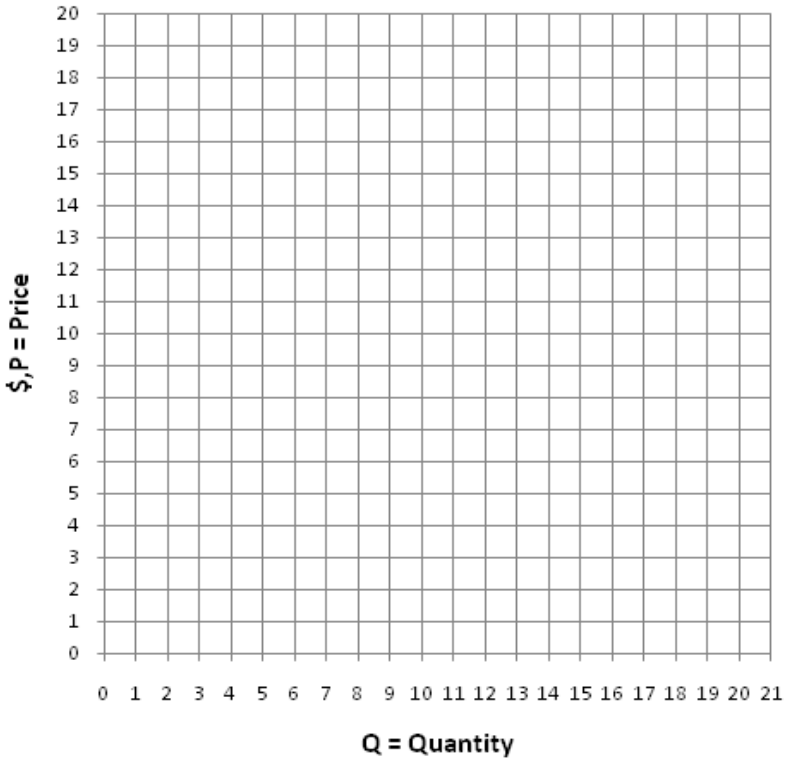
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: Extras

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

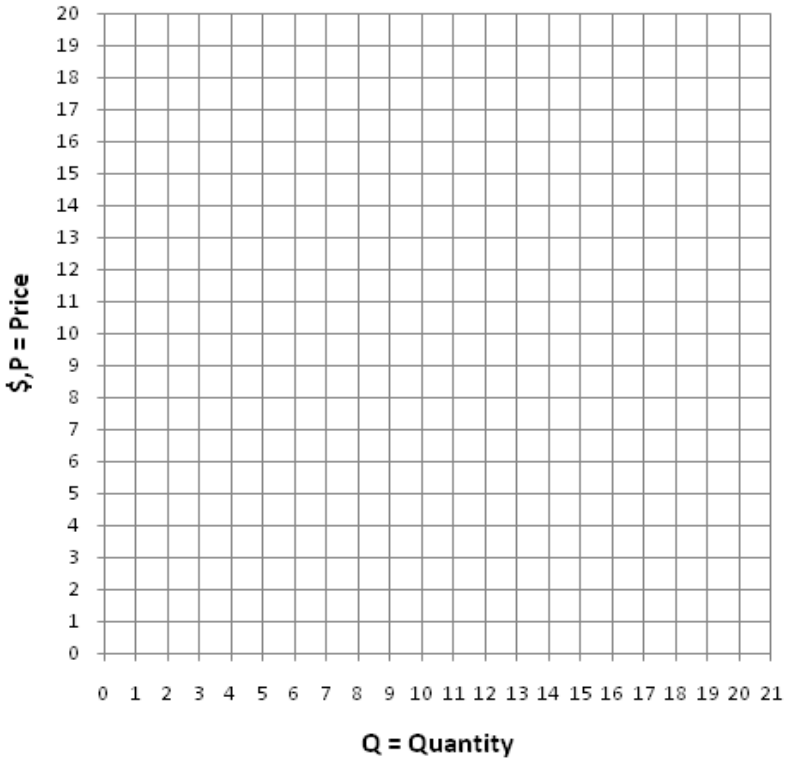
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

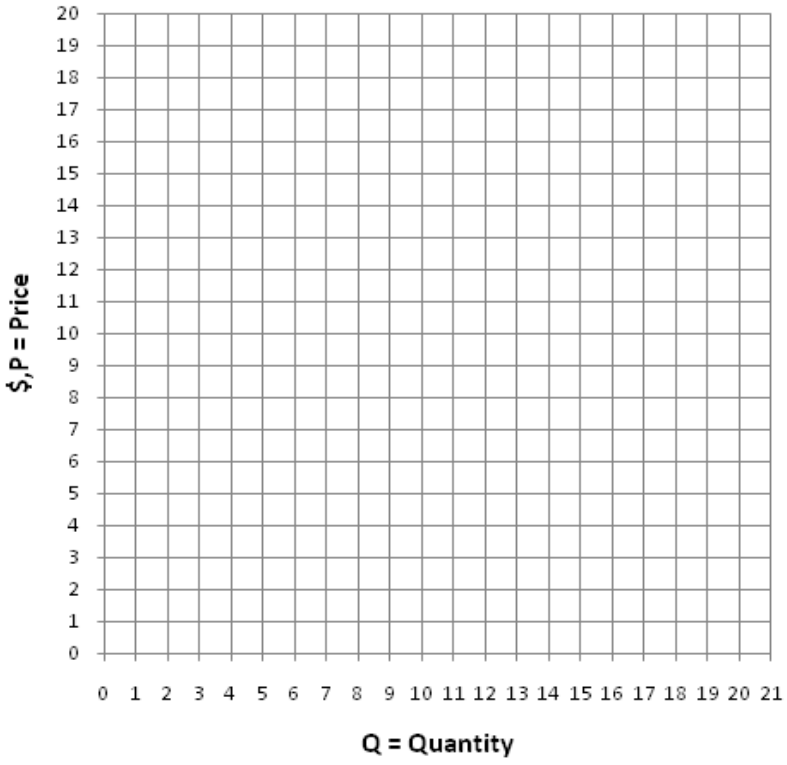
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: Extras

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

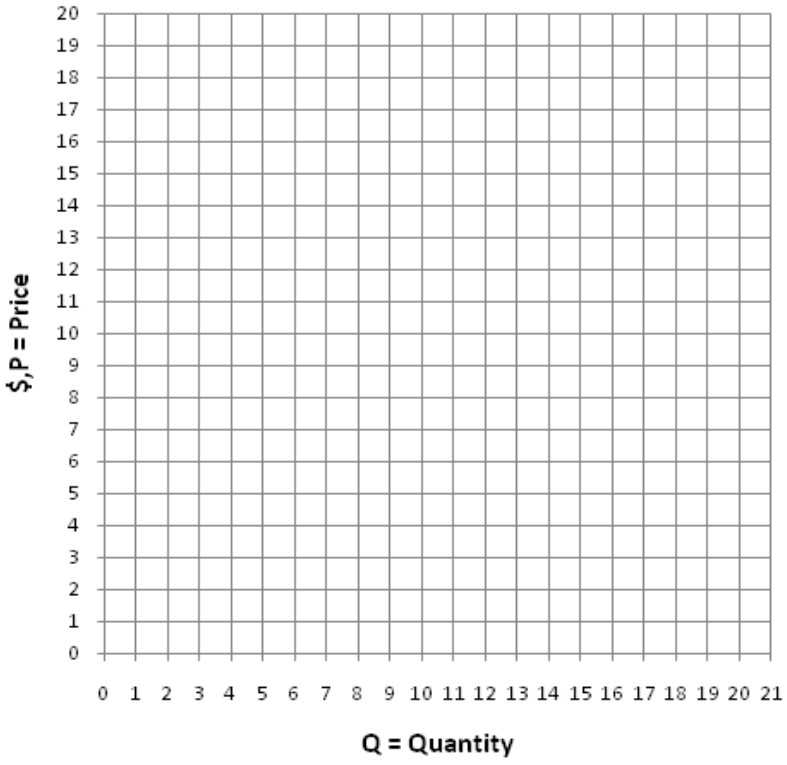
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

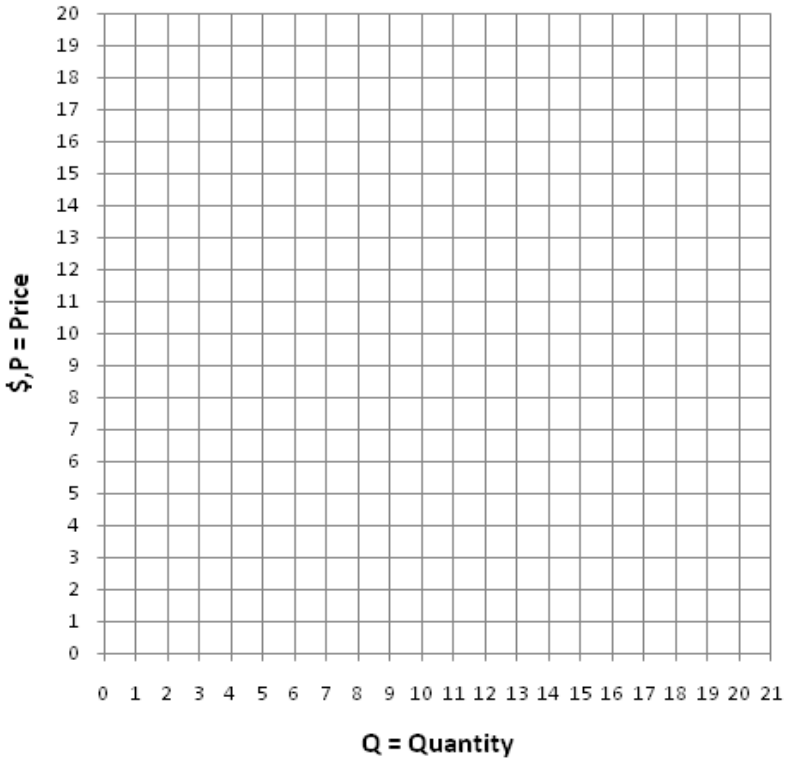
(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

First of Three Sheets for Every Lab

Date: Extras

Name_____

Section # _____

Team ID _____

Comments Regarding This Lab

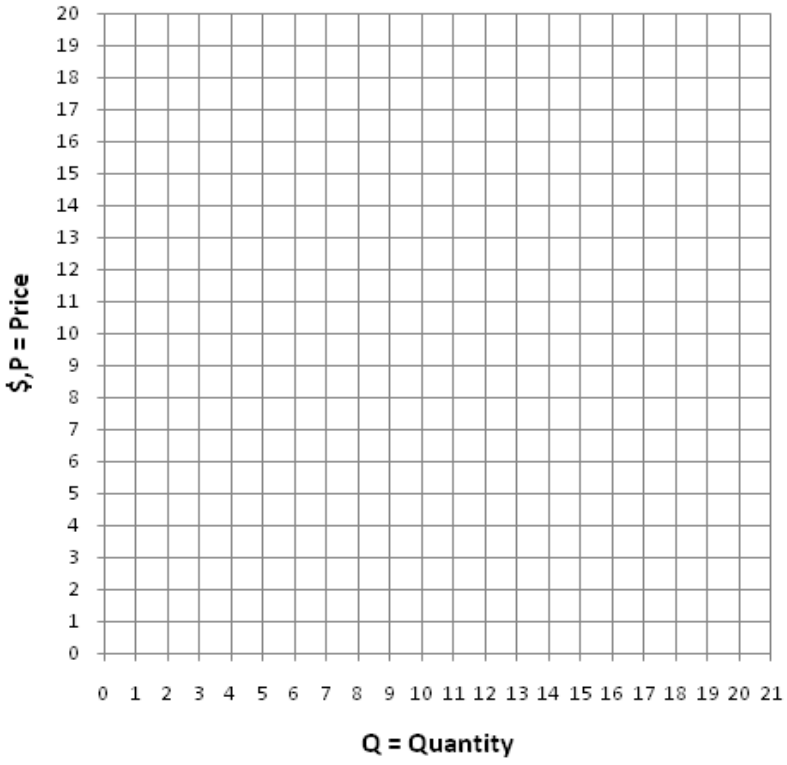
Economic Fact, Quote, Or Concept Of The Day

Worksheet for Sellers

Session (circle one) 1 2

Marginal Cost Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Sold	Marginal Cost
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
13	$_____
14	$_____
15	$_____
16	$_____
17	$_____
18	$_____
19	$_____
20	$_____
21	$_____



(1) Today, I received a price of $_____ per unit and sold _____ units to Team _____, and paid a price of $_____ per unit and sold _____ units to Team _____

(2) Today, my total revenues are $_____.

(3) Today, my total variable cost of production is $_____, my total cost of production is $_____, and my average total cost is $_____.

(4) Today, my producer surplus is $_____ and my total profits are $_____.

Worksheet for Buyers

Session (circle one) 1 2

Marginal Value Curve ($) = _____ + _____(Q) Fixed Cost = $_____

Quantity Purchased	Marginal Value
0	$_____
1	$_____
2	$_____
3	$_____
4	$_____
5	$_____
6	$_____
7	$_____
8	$_____
9	$_____
10	$_____
11	$_____
12	$_____
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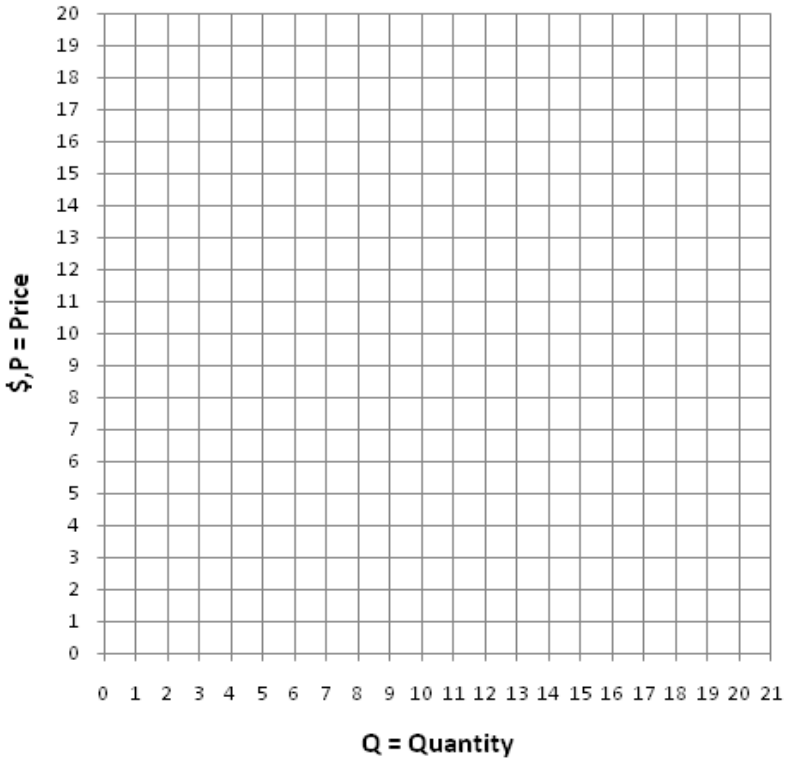
21	$_____



(1) Today, I paid a price of $_____ per unit and purchased _____ units from Team _____,

and paid a price of $_____ per unit and purchased _____ units from Team _____.

(2) Today, my profits increased $_____ from purchasing these inputs (not including the input costs).

(3) Today, my total input costs from purchasing these inputs are $_____.

(4) Today, my consumer surplus is $_____ and my total profits are $_____.

(1) Money, Inflation, Nominal Prices, and Real Prices

(1.1) What is money?

We use it everyday, it both benefits and constrains our lives considerably, and yet we rarely sit back and ruminant on exactly what constitutes money. Pull out your dollar bills and you will see they are mere paper. Intrinsically, your dollar bills are worth nothing. However, as long as other people accept them as payment, they are valuable.

Most of us have heard some story of prisoners using cigarettes as money. Many prisons no longer allow tobacco, so this is no longer the case[1], but historically it was a reality. Why cigarettes? Regular money is not allowed in prisons, yet prisoners still acquire goods from the outside and make goods inside prison, and the desire to trade amongst each other necessitates money.

While bartering is a possibility, bartering requires a *double coincidence of wants*. If I make a knife out of a toothbrush and wish to exchange it for a can of tuna, I have to find someone who has tuna but wants a knife. That is the double coincidence of wants, and it is difficult to find two people who wish to barter the same things. But with money, I only need to find someone who will pay money for the knife, and then find someone who will accept money for their canned tuna. The person buying the knife may be different than the person selling the tuna, and the use of money helps all of us make numerous trades efficiently.

If I did indeed sell my homemade knife, what type of "money" will I use? In prison, it is logical to use as money some good which almost everyone desires. In the past, cigarettes were smoked by most prisoners, so even the nonsmoker could accumulate cigarettes with firm confidence that those cigarettes could be exchanged for other things. Cigarettes are not perishable, and each cigarette is roughly of similar quality as another. For these reasons, the use of cigarettes as money made perfect sense.

(1.1.a) Uses of Money

Money is used for several things, including a (1) medium-of-exchange (2) unit of account—a yardstick people use to measure the relative value of things—(3) store of value and (4) liquidity—ease in which something can be converted into a medium-of-exchange.

(1.1.b) Kinds of Money

There are several different kinds of money. In prison, cigarettes were a type of *commodity money*, meaning the medium-of-exchange has an intrinsic value. Cigarettes themselves had value even if they were not used as money. The same can be said for gold, as gold has historically been the favored form of money. The U.S. began using gold money in 1834 and went "off the gold standard" in 1971, though it temporarily went off the gold standard during the two World Wars.

Most nations today use *fiat money*, where the money has no intrinsic value. Sure, the coins in your pocket have some intrinsic value, but this value is much less than their actual "cash" value. The dollars in your pocket have an intrinsic worth of almost nothing. Although fiat money have no intrinsic value, because they are accepted by almost everyone, they can be used as money. Governments today like fiat money because the value of the currency is not dependent upon the production of an industry (*e.g.*, production of cigarettes or production of gold), and fiat money allows the government to print or destroy money when it sees fit. Often, it does see fit.

(1.2) Nominal and Real Prices

The nominal price is simply the "price tag" or the formal announced price. Today a car may cost $30,000: that is a nominal price. When we buy something with cash, we are not giving up pieces of paper for the good: we are giving up other goods which could have been purchased with the money we paid. The amount of these "other goods" we departed with is the *real price* of a good. For any good, there are an infinite number of real prices, because there an an infinite variety of goods or "baskets" of goods which could be purchased instead.

Suppose we are in prison where cigarettes are used as money. The current price of a sardine can and a Coke

1 Now, canned fish are often used as currency. Most prisoners are interested in building muscle and prison food lacks protein, so the protein in canned fish is highly valued by many.

is:

Sardine price = 10 cigs (cigarettes)
Coke price = 2 cigs

These prices are nominal prices. However, to determine the *real* price, we must determine how many Cokes one forgoes to acquire a sardine can, and *vice versa*.

Real price of sardine can in Cokes = (10 cigs / sardine)(1 Coke / 2 cigs) = 10/2 or 5 Cokes. To obtain one sardine can, we must give up 5 cokes.

Real price of Cokes in sardines = (2 cigs / Coke)(1 sardine / 10 cigs) = 2/10 or 1/5 sardine can.

Real prices of two goods are always reciprocals of one another. Just as one sardine costs 5 Cokes, one Coke costs 1/5 sardines.

Because the cigarettes are also goods, they have a real price. The real price of one cigarette is 1/10 sardines cans or ½ Cokes.

(1.3) Printing Money

The Federal Reserve is the "government bank" which issues currency. That is, all currency originally comes from the Federal Reserve (Fed), so the Fed controls the amount of money which can be used as money. The Fed's main job is to print money. Yes, the government literally prints money. It "prints" electronically, meaning it buys things with money created "out of thin air". It may literally print money, or simply add more "electronic" money to a bank account. This is why we have inflation, and why things cost many more dollars today than it did fifty years ago. Moreover, just as the Fed can create money, it can destroy money.

When the Fed creates money, it buys bonds from the public and pays for the bonds not with taxes, but by creating the money used for the purchase. When we purchase something, we must earn that money from somewhere—not the Fed. When the Fed destroys money, it sells bonds to the public. When the Fed receives the money from the purchase, it destroys it by never, ever spending it. When we sell something we always use the money for something—not the Fed.

The Fed is charged with creating and destroying money in order to (1) maintain stable prices and (2) help mitigate recessions. If the country is in a recession and many people are unemployed, the Fed may be able to print money, thereby increasing spending and production. If inflation is too high, the Fed can reduce inflation by destroying money.

Continuing with our prison example, suppose the number of prisoners and the number of Cokes and sardines remains the same, but the number of cigarettes doubles. What would happen? We would expect the price of sardines and Cokes will double, but the price of cigarettes to be cut in half. However, the number of Cokes required to purchase one sardine, and the number of sardines required for one Coke, to stay the same.

After number of cigarettes double:

Sardine price = 20 cigs (cigarettes)

Coke price = 4 cigs

Real price of sardine can in Cokes = (20 cigs / sardine)(1 Coke / 4 cigs) = 20/4 or 5 Cokes. To obtain one sardine can, we must give up 5 cokes.

Real price of Cokes in sardines = (4 cigs / Coke)(1 sardine / 20 cigs) = 4/20 or 1/5 sardines.

Because the cigarettes are also goods, they have a real price. The real price of one cigarette is 1/20 sardines cans or 1/4 Cokes.

(1.4) Primer—Percent Changes

If X changes from 100 to 150, the percent change is $(X_{new} - X_{old}) / (X_{old}) = (150 - 100) / (100) = 0.5$ or 50%.

If X changes from 100 to 50, the percent change is $(X_{new} - X_{old}) / (X_{old}) = (50 - 100) / (100) = -0.5$ or -50%.

(1.5) Inflation and Deflation

In the previous example, prices double over a given time period. When all prices rise over time, that is referred to as inflation, and the inflation rate denotes the percentage change in prices.

Inflation rate = (new price – old price) / (old price) = (20 sardines – 10 sardines) / (10 sardines) = 1 or 100%.

The inflation rate is the same if we calculate it in terms of Cokes: Inflation rate = (4 Cokes – 2 Cokes) / (2 Cokes) = 1 or 100%.

Inflation only occurs when the prices of *almost everything* increases. If the price of sardines increases while the price of Cokes remaines the same (or falls), the real price of sardines changes while overall inflation does not.

As we will see, sometimes the overall level of prices falls. This is unusual in modern times, but during the Great Depression this was certainly the case. If the prices of all goods falls by 50%, we say *deflation* occurs and the deflation rate is 50%, but we may also say the *inflation rate* is -50%.

(2) Real and Nominal Interest Rates

(2.1) Primer—The Prison Example

Prisoner Bailey borrows 100 cigs from Prisoner Corbett, promising to pay back 140 cigarettes after one year. Thus, Bailey borrows money at a (140 – 100) / (100) = 0.4 or 40%. In return for borrowing 100 cigs, Bailey promises to pay the 100 cigs back, and increase the number of cigs by 40%.

Suppose that one sardine can sells for 10 cigs and one Coke sells for 2 cigs.

That 40% is the *nominal interest rate*, the formal interest rate agreed upon. But again, what is really being traded is goods. The *real interest rate* measures the additional number of goods Bailey agrees to provide in one year in return for borrowing goods today.

When Bailey borrows 100 cigs, he is really borrowing (100 cigs)(1 sardine / 10 cigs) = 10 sardine cans, or (100 cigs)(1 Coke / 2 cigs) = 50 Cokes. When he repays the money, he repays 140 cigs, which translate to 14 sardines or 70 Cokes. Thus, the *real* interest rate is

Real interest rate in sardines = (14 – 10) / (10) = 0.4 or 40%.

Real interest rate in Cokes = (70 – 50) / (50) = 0.4 or 40%.

(2.2) Primer—The Prison Example, With Unanticipated Inflation

This section is identical to the previous section, except that we assume that during the year Bailey borrows money, the number of cigarettes double. Moreover, this doubling of cigarettes was not anticipated. By the end of the year, the price of sardines and Cokes in terms of cigs have doubled. Corbett receives 140 cigs after lending 100 cigs, but each of those 140 cigs purchases less than it did when the money is lent.

We say inflation occurs, because the price of all goods (or almost all goods) have increased.

The nominal interest rate is still the same, as (140 – 100) / (100) = 0.4, but the *real* interest rate has changed. When Corbett receives the 140 cigs, they can now only purchase (140 cigs)(1 sardine / 20 cigs) = 7 sardines. The real interest rate in terms of sardines is (7 – 10) / (10) = -3 / 10 = -0.3 or -30%. When Corbett made the loan, not expecting inflation, he thought he would increase his wealth by 40%, but because of unanticipated inflation, his wealth decreases 30%.

Notice the unanticipated inflation benefits Bailey, the borrower, as he repays with less Cokes and sardines than he anticipated, and hurts Corbett, the lender, as he receives far less sardines and Cokes in return for the loan.

If this inflation could have been anticipated, Corbett the lender surely would have required a higher repayment rate.

(2.3) Primer—The Prison Example, With Unanticipated Deflation

We begin with the same prison setting, where cigs are used as money and the prices of sardines and Cokes are 10 and 2 cigs, respectively. Again, Bailey borrows 100 cigs from Corbett for one year, agreeing to repay 140 cigs at the end of the year.

Now let us assume the number of cigarettes is halved; prices should fall by 50%, making sardines cost 5 cigs and Cokes cost 1 cig. This deflation was not anticipated. What is the real interest rate now?

Corbett lent 100 cigs that would purchase 10 sardines at the time, and receives 140 cigs after one year which can purchase 28 sardines. Similarly, the 100 cigs lent could purchase 50 Cokes when the money was lent, but when Corbett receives the 140 cigs after one year it can purchase 140 Cokes!

Real interest rate = (28 – 10) / (10) or (140 – 50) / (50) = 1.8 or 180%.

The unanticipated deflation benefits Corbett, the lender, as he receives far more sardines or Cokes than he anticipated, and hurts Bailey, the lender, as he repays far more sardines or Cokes than he planned.

If this deflation could have been anticipated, Bailey the lender surely would have required a lower repayment rate.

(2.4) Nominal and Real Interest Rate Basics

A simple formula allows us to calculate the relationship between real and nominal interest rates based on the inflation rate. Let,

i = nominal interest rate

r = real interest rate

π = inflation rate.

Then $i = \pi + r(1 + \pi)$. This is called the *Fisher equation*.

Likewise, $r = (i - \pi)/(1+ \pi)$.

(2.4.a) Return to our prison example. Corbett lends Bailey money (100 cigs) at a 40% nominal interest rate. If inflation during the period the money is lent equals 100%, the real interest rate is...

r = (0.4 - 1)/(1+ 1) = -0.3 or -30%. This is the same answer as in (2.2).

(2.4.b) Return to our prison example. Corbett lends Bailey money (100 cigs) at a 40% nominal interest rate. If inflation during that period is -50%, the real interest rate is...

r = (0.4 + 0.5)/(1- 0.5) = 1.8 or 180%. This is the same answer as in (2.3).

(2.5) Setting Interest Rates

In reality, lenders try to anticipate the inflation rate and adjust the nominal interest rate they offer accordingly. Borrowers do likewise. When lending occurs, the lender is basically forgoing consumption of goods today so that they can consume more goods in the future. The interest rate agreed upon by borrowers and lenders attempts to predict the inflation rate and set the real rate accordingly.

Suppose Bailey and Corbett agree upon a 40% real interest rate, and anticipate 100% inflation. The nominal rate they will set, using the Fisher equation, is...

Then $i = \pi^e + r(1 + \pi^e) = 1 + 0.4\ (1 + 1) = 1.8$ or 180%, where π^e is expected inflation. By definition, if the true inflation equals the anticipated inflation, the real interest rate will equal (1.8 – 1)/(1+1) = 0.4, or 40%.

Likewise, if they anticipate an inflation rate of -50%, they will agree upon a nominal interest rate of...

$i = \pi^e + r(1 + \pi^e) = -0.5 + 0.4(1-0.5) = -0.3$ or -30%. This nominal rate, if the inflation rate indeed turns out to be -50%, will provide the real interest rate of (-0.3 + 0.5) / (1 – 0.5) = 0.4, or 40%.

(3) Interest Rates in the Real World

It is 1931. A farmer wishes to borrow $10,000 for one year, using it to make a farm investment. A lender is willing to make the loan, as long as it increases their wealth by 10%. That is, the lender requires a real interest rate of 10%. Both the farmer and the lender anticipate a 5% inflation rate, so they agree upon a nominal interest rate of...

i = nominal interest rate

r = real interest rate

π^e = expected inflation rate.

$i = \pi^e + r(1 + \pi^e) = 0.05 + 0.1(1+0.05) = .155$, or 15.5%.

(3.1) ***Assume expected inflation = actual inflation***

After one year, the farmer repays the bank ($10,000)(1 + .155) = $11,550.

Although the lender received 15.5% more money than it lent, each of those repaid dollars are worth 5% less, as actual inflation was 5%. The real interest rate received is then...

i = nominal interest rate

r = real interest rate

π = actual inflation rate.

r = (i - π)/(1+ π) = (0.155 – 0.05)/(1 + 0.05) = 0.1 or 10%.

Because actual inflation equals expected inflation, the borrower repays and the lender receives the exact amount of wealth (goods) as they tried to achieve.

(3.2) ***Assume expected inflation (5%) < actual inflation (7%)***

After one year, the farmer repays the bank ($10,000)(1 + .155) = $11,550.

Although the lender receives 15.5% more money than is lent, inflation is greater than the lender anticipates, and the lender repays in dollars worth less than she anticipated.

r = (i - π)/(1+ π) = (0.155 – 0.07)/(1 + 0.07) = 0.0794 or 7.94%.

Although the lender tried to receive a 10% real interest rate, because inflation was two percentage points greater than anticipated, the lender only receives a real interest rate of only 7.94%.

The lender receives less than she anticipated, and the borrower repays less than anticipated. *Unanticipated inflation benefits borrowers but hurts lenders.*

(3.3) ***Assume expected inflation (5%) > actual inflation (-2%)***

After one year, the farmer repays the bank ($10,000)(1 + .155) = $11,550.

Although they thought inflation would be 5%, the price of most things actually fell by 2%. Each dollar is worth more than it was when the money is lent. The lender thus receives a higher real interest rate, and the borrower pays a higher interest rate, than either of them anticipated.

r = (i - π)/(1+ π) = (0.155 - $^{-}$0.02)/(1 + $^{-}$0.02) = 0.1786 or 17.86%.

Although the lender tries to receive a 10% real interest rate, because inflation is seven percentage points less than anticipated, the lender actually receives a real interest rate of 17.86%.

The lender receives more than she anticipated, and the borrower repays more than anticipated. *Unanticipated inflation benefits lenders but hurts borrowers.*

(4) Unanticipated Deflation in the Great Depression

In 1929 there was basically no inflation or deflation rate; the inflation rate was approximately zero. In the five years prior, the inflation rate was also close to zero. Because of this, everyone expected the inflation rate in the next five years to be around zero. Thus, in 1929, when lenders and borrowers agreed upon the nominal interest rate they basically set the nominal and real interest rates equal to one another.

They were wrong. The annual inflation rates between 1930-1933 were about -8%. Consequently, each value dollar in 1933 was worth considerably more than each dollar in 1929—after all, each dollar could now purchase more goods.

This implies that borrowers repaid lenders in dollars valued much higher than they anticipated. For example, suppose a farmer borrowed 100,000 in 1929 for four years at a 4% interest rate. This 4% was both the expected nominal and expected real interest rate to be paid over the next four years. In reality the borrower repays a real interest rate of r = (0.04 – $^{-}$0.08)/(1 +$^{-}$0.08) = (0.12)/(0.92) = 0.13 or 13%. Farmers who thought they would pay a 4% interest rate on their loans actually paid 13%, and this bankrupted a number of farms, and helped make the Great Depression worse.

Think of it this way. A wheat farmer takes out a large loan at a 4% interest rate. When it comes time to pay back the loan, her wheat is selling for 8% less than she anticipated. With less revenues due to lower wheat prices, but the same nominal interest payment, many farmers could not make the payment.

It is this reason why many of our economic leaders today have a deep fear of deflation, and are printing money like crazy to ensure deflation does not occur. It is a fear that may or may not be rational.

(5) Unanticipated Inflation in the 1970's

From 1963 to 1973, the inflation rate was about 4%. In 1974, when lenders and borrowers agreed on a nominal interest rate, they assumed inflation would be about 4%. They were wrong. Inflation in 1974 was 11%

and was 13% in 1980.

As we have seen, unanticipated inflation hurt lenders and benefit borrowers, but this harm to lenders was especially painful. The most responsible Americans placed their savings in safe investment accounts (like CDs) that earned an interest rate of about 6%. They thought these safe investments would protect their savings, but the unanticipated inflation wiped their savings out.

To see this, suppose you placed your savings in an account earning 6% nominal interest, expecting inflation to be 4%, but inflation turned out to be 10%. The real interest rate they earned was r = (0.06 – 0.1)/(1 + 0.1) = -0.0363, or -3.63%. They *lost money!*

It is this reason older people are so fearful of inflation. Consider the following narrative published in the *Wall Street Journal* on June 12, 2009. The narrative was intended to warn the public of the dangerous inflation which could ensue if the Fed sustained their printing of money.

> To people who've worked their whole lives playing by the rules, that is, to the majority of adult Americans in the early 1970's, inflation at the hands of wayward government policy seemed to be a betrayal. People who had been thriftiest watched down payments for buying a home disappear, college savings accounts shrivel, retirement nest eggs vanish, the value of monthly pension checks shrink. Harvard Business School Professor Samuel Hayes recounted the damage to a relative of his in a magazine story: "*He was the epitome of the Protestant Ethic. He had inherited money, he had saved, he was very frugal, had a very modest house, had part of his investment money in bonds and short-term securities, had always maintained liquidity.* ***And he came out of the Seventies looking like a fool***."
>
> From *Wall Street Journal*, editorial section, June 12, 2009.

(6) Nominal and Real Incomes

The subject of inflation often arises in respect to one's salary. Your grandparents are apt to tell you how much cheaper things were in 1950, but surprisingly reticent to convey how small their incomes were in that year. Workers who are members of unions often use formal inflation statistics in their negotiations. The purpose of this section is to provide you with a simple model for determining how to calculate changes in real income based on changes in nominal incomes and real prices.

I am going to show you a quick, simple way for calculating how real incomes change in response to changes in nominal income and inflation.

Percent Change in Real Income = [(1 + percent change in nominal income) / (1 + inflation rate)] - 1.

(6.1) Example

A lady made $45,000 in salary (nominal income) in 2009, but during 2010 her nominal income remained the same while the inflation rate was 5%. What is the percent change in her real income at the end of 2010?

Percent Change in Real Income = [(1 + 0) / (1 + 0.05)] - 1 = -0.05, or -5%, which we already knew, because if the number of dollars she receives is the same, but each of those dollars buys 5% less "stuff", her real income declines by about 5%.

(6.2) Example

A man's nominal income rises 7% while inflation is 4%. What is the percent change in his real income?

Percent Change in Real Income = [(1 + 0.07) / (1 + 0.04)] - 1 = 0.0289, or 2.89%. One might be tempted to simply subtract 4% from 7% to get an answer of 3%, and this is a decent approximation, but not perfectly accurate. A perfectly accurate says the man's income rises 2.89%.

(6.3) Example

Over a fifty year time period, the average nominal income in a nation rises by 30% while inflation rises 37%.

What is the percent change in the amount of goods and services this nation can purchase after fifty years?

Percent Change in Real Income = [(1 + 0.3) / (1 + 0.37)] - 1 = -0.051 or -5.1%. Though the inflation rate was 7 percentage points greater than the percent change in income, the real purchasing power of the nation only declines by 5.1%.

(6.3) Example

Over a fifty year time period, the average nominal income in a nation declines by 20% while the inflation rate is -45% (which might be stated as a deflation rate of 45%). Although people's nominal incomes declined over this fifty year period, were they able to buy more or less stuff

Percent Change in Real Income = [(1 + -0.20) / (1 + -0.45)] - 1 = 0.4545 or 45.45%. Although the average person brought in less dollar bills, each of those dollar bills could buy much more than before, allowing the nation's purchasing power to rise by 45.5%.

The Cost of Free Government Money

by Bailey Norwood

"In politics you try to move money around and take credit for it. In markets you try to create value and make profits."

Rent-Seeking: Rent seeking is the expenditure of scarwce resources to capture wealth through political influence.

The federal government decides to bestow grants to various cities to help nourish neighborhoods and help people own a home, especially the poor. Through the Department of Housing and Urban Development (HUD), the government gives away large sums of money.

But is this free money? I would argue that it destroys value. Try and follow this line of logic.

- Suppose the federal government wishes to bestow $1 billion to some city to help low income families obtain housing.
- To determine which city gets the money, the government allows competition. Cities interested submit proposals for how they would spend the money.
- That $1 billion had to come from somewhere. It usually comes from taxes, but it could come from government borrowing, which means someone in the U.S. loaned the government money. Either way, the $1 billion injected into nation came from $1 billion that was extracted from the nation.
- Then, we pay even more than the $1 billion for that money. For NY to obtain the $1 billion, it must hire expensive lobbyists and consultants to draft sophisticated plans on how the money would be spent.
- One city official has stated they employ 15 people whose jobs were devoted exclusively to obtaining federal grants. It costs them $0.25 for every $1.00 of federal grants they obtain. This sounds like a good investment, but when you consider that many other cities are doing the same thing, you realize that cities collectively are spending more than $1 billion to obtain the $1 billion of federal money. This is in addition to the $1 billion in taxes the government takes to obtain the money!
- Thus, the cost of providing the $1 billion in "free" money far exceeds the $1 billion.
- Moreover, this type of rent-seeking takes highly skilled people (e.g. lawyers), and instead of having them produce something valuable for society, they chase this "free money", which does not create value for society.
- *Or, maybe this is just the cost of wealth transfer? If you really value income equality, this may be a cost you have to pay.*

We usually think of competition as good, but in political markets, this is not always the case. This kind of value destruction does not occur in private markets.

This demonstrates how politics and rent-seeking work to destroy value. Unfortunately this type of activity will never cease, because politicians obtain and preserve their power by taking money from one group of people and giving it to another. This alone is bad. However, it does more than just transfer wealth, it destroys wealth. That is terrible.

As our federal government begins devising a large stimulus package to "reinvigorate" the economy, and as they start deciding who will receive the money, where do you think the money will come from, and what is the cost of the stimulus package?

_____

Article is based off *Rent-Seek and You Will Find* by Mike Munger. Available at the Library of Economics and Liberty: www.econlib.org.

(1) *[Ch. 1, pg 1-4]* Within the field of economics, _____ studies individual markets (*e.g.*, how beer producers and consumers interact), while _____ studies large economies (*e.g.*, how to pull the country out of a recession).

(a) microeconomics, macroeconomics

(b) behavioral economics, environmental economics

(c) microeconomics, environmental economics

(d) agricultural economics, macroeconomics

(e) psycho-economics environmental economics

(2) *[not in book]* Which of the following fields do faculty members in the Department of Agricultural Economics at OK State NOT study.

(a) microeconomics

(b) macroeconomics

(c) environmental economics

(d) agricultural economics

(e) behavioral economics

(3) *[not in book]* Which of the following are valid criteria for judging economic models?

(a) ability of a model to predict accurately
(b) ability of a model to reflect many complexities of the world regarding the question being asked
(c) usefulness of a model in addressing the economic question
(d) the consequences of the model for political considerations

(a) a,b,c,d

(b) a,b,c

(c) a,c

d) b,d

(e) a,b,d

(4) *[Ch. 1, pg 1-4]* How did Zimbabwe prevent the elephant from becoming extinct?

(a) It banned elephant hunting

(b) It subsidized breeding programs for elephants

(c) It placed a ban on the export of elephant tusks.

(d) It allowed people to "own" the elephants

(e) It killed many of the predators that hunt and kill elephants

(5) *[Ch. 1, pg 1-4]* Within the field of economics, _____ studies individual markets (*e.g.*, how beer producers and consumers interact), while _____ studies large economies (*e.g.*, how to pull the country out of a recession).

(a) microeconomics, environmental economics

(b) agricultural economics, macroeconomics

(c) psycho-economics environmental economics

(d) microeconomics, macroeconomics

(e) behavioral economics, environmental economics

(6) *[not in book]* Which of the following fields do faculty members in the Department of Agricultural Economics at OK State NOT study.

(a) macroeconomics

(b) microeconomics

(c) agricultural economics

(d) environmental economics

(e) behavioral economics

(7) *[not in book]* Which of the following are valid criteria for judging economic models?
(a) ability of a model to predict accurately
(b) ability of a model to reflect most complexities and details of the world
(c) usefulness of a model in addressing the economic question
(d) the consequences of the model for political considerations

(a) a,b,c,d (c) a,c (e) a,b,d

(b) a,b,c d) b,d

(8) *[Ch. 1, pg 1-4]* How did Zimbabwe prevent the elephant from becoming extinct?

(a) It banned elephant hunting

(c) It placed a ban on the export of elephant tusks.

(e) It killed many of the predators that hunt and kill elephants

(b) It subsidized breeding programs for elephants

(d) It allowed people to "own" the elephants

(9) The *Three I's of Economic Theory* are incentives, _____, and indifference.

(a) individuality

(b) intercolate

(c) interest

(d) interactions

(10) We all know that incentives matter, but economists _____ (see page 5)

(a) insist on taking incentives seriously at all times

(b) insist on studying incentives in select circumstances

(c) go further to study how incentives might not matter

(d) ignore incentives

(11) Which of the following are incentives which economists have determined humans respond to?

(a) regions with higher beer taxes have lower rates of child abuse and child homicide rates

(b) every capital punishment execution deters eight murders that would have occurred

(c) corporate mergers rarely benefit stockholders, but CEO's pursue them because it gives them more power and more money

(d) a,b,c

(12) It is the first sunny and warm day of Spring. Will people prefer to visit the zoo, which is outside, or the aquarium, which is inside and can be just as easily visited on bad-weather days? (page 8)

(a) people will obviously prefer going to the zoo and enjoying the warm weather

(b) people will be, on average, indifferent. The large crowds and long lines at the zoo will just offset the benefits of being outside on the first pleasant day, in a way that makes the aquarium equally appealing.

(c) the lines will be so long at the zoo, and the crowds so large, that people, on average, will prefer going to the aquarium instead.

(d) a,b,c

(13) The Three I's of Economic Theory are...

(a) incentives, interactions, and indifference

(b) invest, interest rate, increase

(c) interest, incentives, innovation

(d) indifference, interstate, intertake

(14) In the Ultimatum Game, the allocator is given a sum of money, and offers a portion of that money to the receiver. If the receiver accepts the offer they both receive their receptive sums, whereas if the receiver rejects the offer they both receive nothing. Which of the following best describes how individuals tend to play this game, across the hundreds of experiments that have been conducted.

(a) the allocator tends to offer a small amount of the money, and the receiver accepts it, because the receiver knows *some* money is better than *no* money.

(b) the allocator tends to offer 30-50% of the money, and the receiver tends to accept the offer

(c) the allocator tends to offer 30-50% of the money, and the receiver tends to reject the offer, unless the offer is 50% or higher

(d) the strategies of individuals are so idiosyncratic that there is no behavioral tendencies that social scientists can identify

(15) Suppose that Norwood Rocks, Inc. is a corporation that invents a new genetically modified crop seed that saves the farmer $15 per acre in pesticide costs, if that seed is sold at the same price as conventional seed. This technique is patented by the corporation. What is the price-premium the corporation will charge for the seed, relative to the price of conventional seed. Assume notions or fairness are taken into account, that is, assume the Ultimatum Game describes how farmers would behave when purchase seed,

(a) $15 per acre, or a little less

(b) around $10 per acre

(c) around $5 per acre

(d) around $20 per acre

Use the following information to answer the next two questions.
Margaret prefers farming to industry labor. In fact, she values farming at $10,000 more than industry labor, meaning she is willing to make up to $10,000 less farming than in industry labor, but if she can make more than $10,000 extra working in industry, she will prefer working in industry. Assume the availability of cropland is limited, and all farmers rent their cropland. Assume the market for "industry labor" is so big that salaries in the industry will remain the same regardless of whether people leave industry to become farmers or leave farming to work in industry. The industry labor salary is $50,000. Do not take into account notions of fairness, as revealed in the Ultimatum Game.

(16) Suppose that farm subsidies were zero, but subsidies now increase the amount of money Margaret can make farming by $5,000. How will these subsidies change the amount of money Margaret pays to rent cropland?

(a) Margaret will pay $5,000 more in land rent.

(b) Margaret will pay $3,334 more in land rent

(c) Margaret will pay $5,000 less in land rent.

(d) Margaret will not pay any additional money for land rent

(e) Margaret will pay $3,334 less in land rent.

(17) Suppose that farm subsidies were zero, but subsidies now increase the amount of money Margaret can make farming by $5,000. Additionally, Margaret and all farmers are taxed at a higher rate, but industry workers are not. This tax increases the amount Margaret pays in taxes by $2,000. How will these taxes change the amount of money that Margaret makes by farming?

(a) Margaret's farming income will increase by $7,000.

(b) Margaret's farming income will increase by $3,000.

(c) Margaret's farming income fall by $7,000.

(d) Margaret's farming income will fall by $2,000.

(e) The amount of money Margaret makes farming will not change.

(18) How did the Oakland A's become such an awesome team around the year 2000?

(a) they utilized the Indifference Principle to pay each player a higher salary than the baseball league "officially" allowed

(b) they arbitraged by paying more for players with a high on-base percentage and paying less for players with a high slugging percentage

(c) they collected secret, unique data on baseball player performance, enabling them to better determine which players were the best

(d) their investments were made at a lower discount rate, allowing them to pay higher salaries in 2000, but they would have to pay less in later years

(19) Suppose that wheat is grown in both Dodge City (DC) and Kansas City (KC). Assume that all wheat produced in both regions is ultimately utilized in KC and only in KC, meaning all DC wheat must find its way to KC. Suppose that we know the price in KC is $3.00 per bu, and the cost of transporting wheat between DC and KC is $0.05 per bushel. Then, if the Force of One Price holds, circle the one appropriate answer.

(a) the price in DC must be $3.05

(b) the price in DC must be $2.95

(c) the price in DC must be equal to or between $2.95 and $3.05

(d) the price in DC must be less than $2.95

(e) the price in DC must be greater than $3.05

(20) Suppose that wheat is grown in both Dodge City (DC) and Kansas City (KC). Assume that wheat is "utilized" in both DC and KC, meaning at both locations wheat is processed into a consumer item. Suppose that we know the price in KC is $3.00 per bu, and the cost of transporting wheat between DC and KC is $0.05 per bushel. Then, if the Force of One Price holds, circle the one appropriate answer.

(a) the price in DC must be $3.05

(b) the price in DC must be $2.95

(c) the price in DC must be equal to or between $2.95 and $3.05

(d) the price in DC must be less than $2.95

(e) the price in DC must be greater than $3.05

(21) Suppose that the price of corn in February is $2.75 per bushel, and the price of corn in March is $2.85 per bushel. What do these prices tell us about the cost of storing corn one month? Select the one most appropriate answer

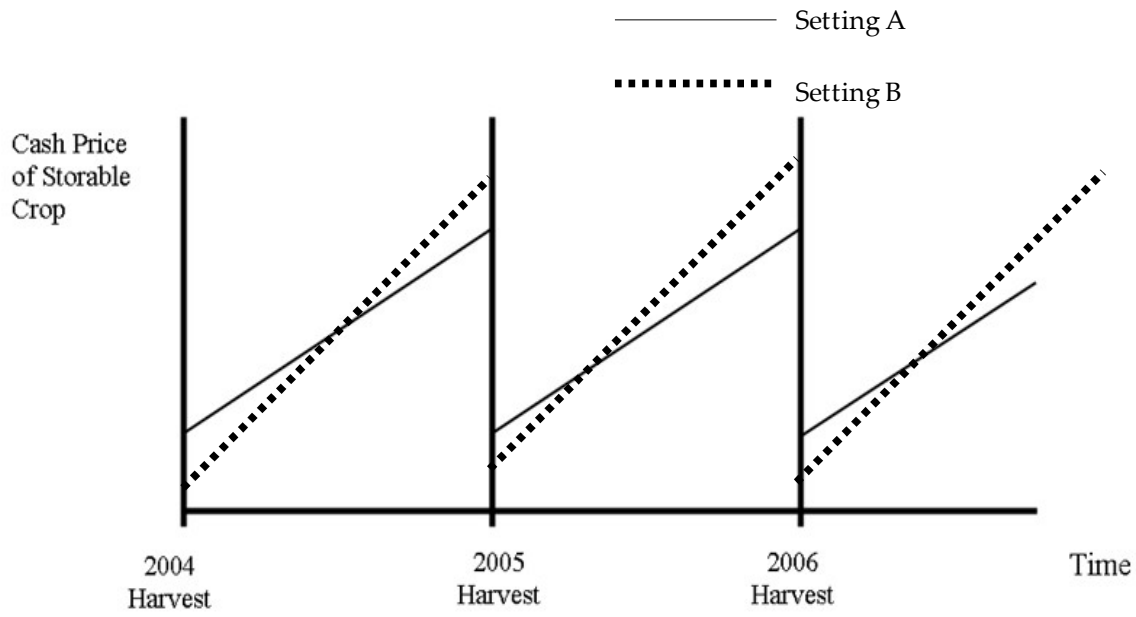
(a) prices cannot be used to infer storage costs

(b) the cost of storing corn one month equals $0.10 per bushel.

(c) the cost of storing corn one month equals $0.05 per bushel.

(d) it must be the case that corn is harvested around February, and no one would rationally store corn between February and March.

Use the figure below to answer the next question.



(22) Suppose we are studying the price of barley across crop years (a "crop year" ends when the product is harvested). The solid line shows the behavior of crop prices in Setting A, and the dotted line shows the behavior of crop prices in Setting B. What do we know about the differences in storage costs for the crop between Settings A & B?

(a) prices cannot be used to infer storage costs

(b) The cost of storage must be smaller in Setting B than Setting A

(c) The cost of storage must be larger in Setting B than Setting A

(d) it must be that storage costs are identical in Settings B and A

(23) Suppose that wheat is grown in both Dodge City (DC) and Kansas City (KC). Assume that all wheat produced in both regions is ultimately utilized in KC and only in KC, meaning all DC wheat must find its way to KC. Suppose that we know the price in KC is $4.00 per bu, and the cost of transporting wheat between DC and KC is $0.10 per bushel. Then, if the Force of One Price holds, Circle the one appropriate answer

(a) the price in DC must be $3.90

(b) the price in DC must be $4.10

(c) the price in DC must be equal to or between $3.90 and $4.10

(d) the price in DC must be less than or equal to $3.90

(e) the price in DC must be less than or equal to $4.10

(f) none of the above

(24) Suppose that wheat is grown in both Dodge City (DC) and Kansas City (KC). Assume that wheat is "utilized" in both DC and KC, meaning at both locations wheat is processed into a consumer item. Suppose that we know the price in KC is $4.00 per bu, and the cost of transporting wheat between DC and KC is $0.10 per bushel. Then, if the *Force of One Price* holds, *Circle the one appropriate answer*

(a) the price in DC must be $3.90

(b) the price in DC must be $4.10

(c) the price in DC must be equal to or between $3.90 and $4.10

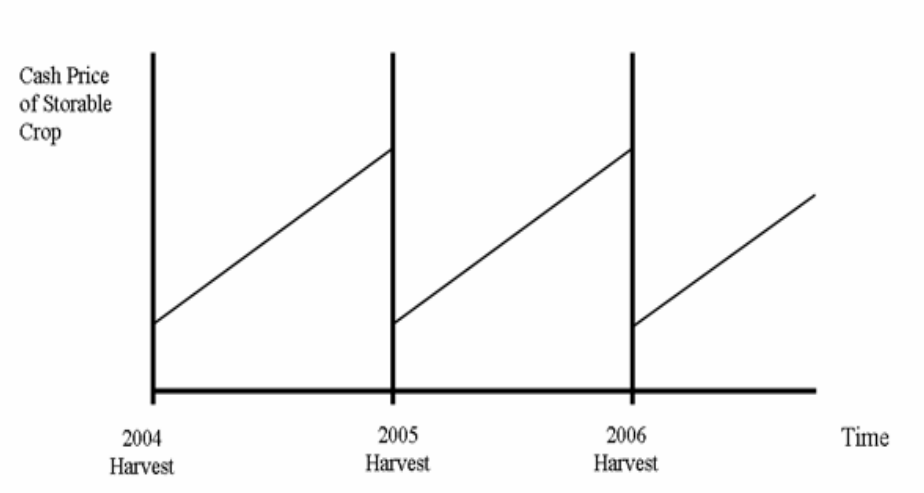
(d) the price in DC must be less than or equal to $3.90

(e) the price in DC must be less than or equal to $4.10

(f) none of the above

(25) Corn is harvested in November-December. Assume storage costs are $0.20 per bushel. It is currently January and the corn price is $3.10. Assume the Indifference Principle holds. What is the price of corn in the future months?

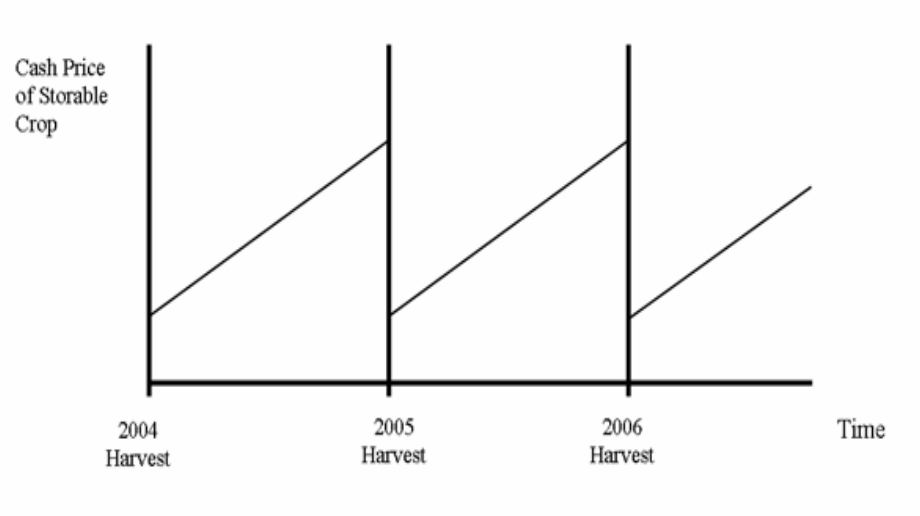
	Corn Price
January	$3.10
February	
March	



(26) The graph above illustrates the behavior of crop prices between harvests. Illustrate how the graph would change if storage costs fell.

(27) The graph below illustrates the behavior of crop prices between harvests. Illustrate how the graph would change if storage costs rose.

(28) The graph below illustrates the behavior of crop prices between harvests. Illustrate how the graph would change if storage costs fell to equal zero.



(29) Suppose that *Monsanto* develops a genetically modified (GM) seed, which grows into a corn plant able to produce its own pesticide to wards of certain pests. This reduces the amount of pesticides the farmer must apply, saving her $14 per acre in pesticide costs. Thus, if the genetically modified seed sold at the same price as conventional seed, farmers' profits would rise $14 per acre of corn raised. Suppose that notions of fairness does not come into play. Will farmers prefer planting the GM seed or conventional seed? What will be the price of GM seed relative to conventional seed? Who realizes the benefits from this technological development?

(30) Same as the previous question, except that notions of fairness come into play.

(31) The Three I's of Economic Theory are...

(a) invest, interest rate, increase

(b) incentives, interactions, and indifference

(c) interest, incentives, innovation

(d) indifference, interstate, intertake

(32) Which of the following are incentives which economists have determined humans respond to?

(a) regions with higher beer taxes have lower rates of child abuse and child homicide rates

(b) every capital punishment execution deters eight murders that would have occurred

(c) corporate mergers rarely benefit stockholders, but CEO's pursue them because it gives them more power and more money

(d) Matadors behave more dangerously as hospitals' ability to repair injuries improve

(e) all of the above

(33) In the Ultimatum Game, the allocator is given a sum of money, and offers a portion of that money to the receiver. If the receiver accepts the offer they both receive their receptive sums, whereas if the receiver rejects the offer they both receive nothing. Of the sum of money the allocator is endowed, what proportion is typically offered to the receiver when the game is played.

(a) 30-70%

(b) 45-50%

(c) 30-50%

(d) 50-70%

(e) <10%

(34) What is the term for profiting from price differences across space or time?

(a) Law of One Price

(b) Force of One Price

(c) Arbitrage

(d) Parity

(35) Suppose that Kramer-America, Inc. invents a new fertilizer production technology that saves the farmer $30 per acre, if that fertilizer is sold at the same price as conventional fertilizers. This technique is patented by Kramer-America. What will be the price premium Kramer-America will charge for this technology, as stated on a per acre application price?

(a) $30 per acre, or a little less, if fairness notions are not taken into account

(b) $20 per acre, if fairness notions are taken into account

(c) $10 per acre, if fairness notions are taken into account

(d) a,b

(e) a,c

(36) *This question follows from the previous question.* Consider a setting very similar to the story involving *Wren the Farmer* in the textbook, in the section regarding farm subsidies. You may assume that Wren is just like thousands of other people, there is a large market for industry labor that pays $45,000 regardless of how many people leave the industry to farm or leave farming to work in the industry. Assume that land is plentiful, and that there are plenty of additional acres available to farm that are currently not being farmed. You may also assume that most farmers rent their land. Suppose that the government begins giving farmers an annual $10,000 subsidy. How will this subsidy affect farmers?

(a) It will not benefit farmers. As people leave industry to become farmers they will simply bid up the price of land until the extra rent farmers pay is exactly equal to the $10,000 subsidy they receive.

(b) It will not benefit farmers. As people leave industry to become farmers they will keep producing more and more crops, until the price of those crops fall just enough so that the profit decline exactly offsets the $10,000 subsidy.

(c) It will benefit farmers. Landowners cannot be expected to become aware of the subsidy, and will therefore not increase the price they charge for land rent. Thus, the farmer does receive the subsidy in full, with no offsetting losses.

(d) It will benefit farmers. As landowners scramble to increase their rents they will end up spending more money trying to obtain government subsidies than the subsidies themselves. This discourages landowners from increasing rents, allowing the farmer to collect the subsidy in full with no offsetting losses.

(37) How did the Oakland A's become such an awesome team around the year 2000?

(a) they utilized the Indifference Principle to pay each player a higher salary than the baseball league "officially" allowed

(b) they arbitraged by paying more for players with a high on-base percentage and paying less for players with a high slugging percentage

(c) they collected secret, unique data on baseball player performance, enabling them to better determine which players were the best

(d) their investments were made at a lower discount rate, allowing them to pay higher salaries in 2000, but they would have to pay less in later years

(38) Suppose that wheat is grown in both Dodge City (DC) and Kansas City (KC). Assume that wheat is "utilized" in both DC and KC, meaning at both locations wheat is processed into a consumer item. Suppose that we know the price in KC is $4.50 per bu, and the cost of transporting wheat between DC and KC is $0.20 per bushel. Then, if the Force of One Price holds, circle the one appropriate answer

(a) the price in DC must be $4.30

(b) the price in DC must be $4.70

(c) the price in DC must be equal to or between $4.30 and $4.70

(d) the price in DC must be less than or equal to $4.30

(e) the price in DC must be less than or equal to $4.70

(f) none of the above

(39) Suppose that wheat is grown in both Dodge City (DC) and Kansas City (KC). Assume that all wheat produced in both regions is ultimately utilized in KC and only in KC, meaning all DC wheat must find its way to KC. Suppose that we know the price in KC is $4.50 per bu, and the cost of transporting wheat between DC and KC is $0.20 per bushel. Then, if the Force of One Price holds, circle the one appropriate answer

(a) the price in DC must be $4.30

(b) the price in DC must be $4.70

(c) the price in DC must be equal to or between $4.30 and $4.70

(d) the price in DC must be less than or equal to $4.30

(e) the price in DC must be less than or equal to $4.70

(f) none of the above

(1) The Federal Reserve decides to take money from people and burn it. This will cause the _____ price of all goods and services to _____, but _____ prices will be largely unchanged.
(a) nominal, rise, real (c) nominal, fall, nominal (e) real, rise, nominal

(b) real, fall, nominal (d) nominal, fall, real

(2) The U.S. and most of the world uses _____money as a medium of exchange.
(a) fiat (c) paperesq (e) economal

(b) commodity (d) photol

(3) The Federal Reserve decides to print money and give it to people. This will cause the _____ price of all goods and services to _____, but _____ prices will be largely unchanged.
(a) nominal, fall, real (c) nominal, rise, real (e) nominal, fall, nominal

(b) real, rise, nominal (d) real, fall, nominal

(4) The U.S. and most of the world uses _____money as a medium of exchange.
(a) photol (c) paperesq (e) economal

(b) commodity (d) fiat

(5) Archeologists discover an ancient society that used silver as money (the medium of exchange). Findings suggest that one average house would cost 200 lbs of silver while one baby ox would cost 25 lbs of silver. What was the real price of an average house in this society?
(a) 5,000 baby oxes (c) 1/8 baby oxen (e) 8 parity price
(b) 5,000 dollars (d) 8 baby oxes

(6) The nominal interest rate equals
(a) (real interest rate)(1 - inflation rate) - (inflation rate) (c) (real interest rate)(1 + inflation rate) + (inflation rate)

(b) (real interest rate)(1 - expected inflation rate) - (expected inflation rate) (d) (real interest rate)(1 + expected inflation rate) + (expected inflation rate)

(7) Borrows and lenders agree on a nominal interest rate of 8% for money lent/borrowed over one year. The expected inflation rate over that year is 5.5%. However, the actual inflation rate realized over that year is 2%. What is the real interest rate paid by borrowers and earned by lenders over that time period?
(a) 2.37% or 0.0237 (c) 3.32% or -0.0332 (e) 3% or 0.03

(b) 5.88% or0.0588 (d) -2.31 or -0.0231

(8) Suppose that real incomes fall. Which of the following would be consistent with a decline in real incomes? (FYI: the word "steady" means "not changing", and you can replace the word "income" with "wages" if you like)

(a) steady nominal income and deflation

(b) falling nominal income but even faster deflation

(c) steady nominal income and inflation

(d) steady nominal income and no inflation or deflation

(e) none

(9) A bank lends a borrower money at a 10% nominal interest rate. The inflation rate during the time the money was lent ends up being higher than was expected. How does this unexpected high inflation impact lenders and borrowers?

(a) lenders benefit borrowers hurt

(b) lenders hurt borrowers benefit

(c) lenders benefit borrowers benefit

(d) lenders hurt borrowers hurt

(e) neither lenders nor borrowers are affected

(10) Archeologists discover an ancient society that used silver as money (the medium of exchange). Findings suggest that one average house would cost 200 lbs of silver while one baby ox would cost 25 lbs of silver. What was the real price of an average baby ox in this society?

(a) 5,000 baby oxes

(b) 5,000 houses

(c) 1/8 houses

(d) 8 baby oxes

(e) 8 parity price

(11) The nominal interest rate equals

(a) (real interest rate)(1 - inflation rate) - (inflation rate)

(b) (real interest rate)(1 - expected inflation rate) - (expected inflation rate)

(c) (real interest rate)(1 + inflation rate) + (inflation rate)

(d) (real interest rate)(1 + expected inflation rate) + (expected inflation rate)

(12) Borrows and lenders agree on a real interest rate of 15% for money lent/borrowed over one year. The expected inflation rate over that year is 7%. However, the actual inflation rate realized over that year is 2%. What was the nominal interest rate negotiated by the borrows and lenders at the beginning of the year?

(a) 23.05% or 0.2305

(b) 5.88% or0.0588

(c) 3.32% or -0.0332

(d) -2.31 or -0.0231

(e) 13% or 0.13

(13) Suppose that real incomes rise. Which of the following would be consistent with a rise in real incomes? (FYI: the word "steady" means "not changing", and you can replace the word "income" with "wages" if you like)

(a) steady nominal income and deflation

(b) steady nominal income and inflation

(c) rising nominal income but even faster inflation

(d) falling nominal income and inflation

(e) none

(14) A bank lends a borrower money at a 10% nominal interest rate. The inflation rate during the time the money was lent ends up being lower than was expected. How does this unexpected high inflation impact lenders and borrowers?

(a) lenders benefit
borrowers hurt

(b) lenders hurt
borrowers benefit

(c) lenders benefit
borrowers benefit

(d) lenders hurt
borrowers hurt

(e) neither lenders nor
borrowers are affected

(1) *[Ch. 1, pg 22-24]* Mexico City once tried to reduce air pollution by requiring every registered car to be idle throughout the day, one day each week. What was the result of this policy?

(a) People carpooled on the day their car could not be driven. With the additional weight added to each car from more passengers, the car used more gasoline and thereby created more air pollution than before the policy.

(b) With cars off the streets, the incentives were for people to ride their bikes, thereby reducing air pollution.

(c) People simply purchased fake registrations for their cars to be used on the day their car was supposed to be idle. Air pollution did not change, but people paid a higher price for transportation due to the high cost of false registrations.

(d) People purchased an older car to driven on the day their newer car was supposed to be idle. These older cars are less efficient and produce more pollution. As a result, air pollution worsened.

(2) *[Ch. 1, pg 22-24]* Policies sometimes create perverse incentives, leading to an outcome that is the opposite of the policy's intention. What term best describes this situation?

(a) Law of Unintended Consequencs

(b) Perverse Policy Phenomena

(c) Opposite Fallacy of Policy

(d) Negated Policy Fallacy

(3) *[Ch. 1, pg 20-22]* Some have argued that due to the devastation in Haiti, the efforts to rebuild the country will encourage economy activity, leading to even greater wealth than before. This argument suffers from the _____.

(a) Old-Toy-New-Toy Critique

(b) Replenished-Toy Fallacy

(c) Repaired Window Fallacy

(d) Holcombe Critique

(e) Broken Window Fallacy

(1) True/False: Every market transaction makes the buyer and seller better off.
(a) TRUE (b) FALSE

(2) True/False: Every market transaction makes the buyer and seller better off, but sometimes an externality occurs, where a third-party is harmed or benefited.
(a) TRUE (b) FALSE

(3) True/False: If an externality occurs, government not only *can* interfere with markets to improve social welfare, but government interference is *guaranteed* to improve social welfare.
(a) TRUE (b) FALSE

(4) Suppose an oil refinery purchases crude oil and processes it into gasoline. The refinery process creates a number of air pollutants, which cause asthma in local towns and acid rain. The refinery currently pollutes with no consequences, meaning it does not pay any cost for the pollution it produces. This air pollution is a _____. One way of correcting this market failure is to _____ the firm for each lb of air pollutant it emits.

(a) negative externality
subsidize

(b) positive externality
subsidize

(c) negative externality
tax

(d) positive externality
tax

(5) If an individual receives an immunization that prevents them from contracting smallpox, the individual benefits greatly. However, because the immunization makes her far less likely to spread smallpox to other members of society, society at-large benefits from her immunization. The positive benefit society receives is a _____, and the market failure can be addressed by _____ immunizations.

(a) negative externality
subsidizing

(b) positive externality
subsidizing

(c) negative externality
taxing

(d) positive externality
taxing

(6) **True/False:** Every market transaction makes the buyer and seller better off, and in the absence of externalities, no third-party is impacted.

(a) TRUE (b) FALSE

(7) **True/False:** Whenever an externality is present, market failure is said to occur.

(a) TRUE (b) FALSE

(8) **True/False:** Whenever market failure occurs, governments will always improve social welfare through the use of taxes or subsidizes.

(a) TRUE (b) FALSE

(9) The production of energy through the use of coal creates air pollution, harming all who breathe the air. This pollution is referred to as a(n) _____, and one way of addressing this problem is by _____ energy produced from coal.

(a) negative externality, subsidizing

(b) positive externality, taxing

(c) negative externality, taxing

(d) positive externality, subsidizing

(10) Fire-proofing a home benefits the sellers of fire-proofing materials and the buyers of the materials, as it decreases the chance of fire. Fire-proofing also benefits neighbors, as it reduces the likelihood that a fire started in one's home will spread to adjacent homes. This benefit to 3rd parties of the transaction is referred to as a(n) _____, and can be addressed by _____ fire-proofing products.

(a) negative externality, subsidizing

(b) positive externality, taxing

(c) negative externality, taxing

(d) positive externality, subsidizing

(11) Some individuals claim that food grown locally is better for the environment. However, local food is more expensive because the cost of production at the farm is much larger. Their reasoning is that the shorter distance food travels between farm and kitchen entails less fossil fuel usage, and hence less air pollutants. These individuals ask you (someone who had economics under Dr. Norwood) what you think. What might a good economists state?

(a) If local food is more expensive, it must be that the farm used more environmentally friendly production methods.

(b) Local food also has the property that it stimulates the local economy.

(c) If local food is more expensive, it might be because more fossil fuels were used on the farm, possibly negating the fewer fossil fuels used in transporting the food.

(12) Consider the topic of whether to use virgin paper or recycled paper. If no externalities exists, an economist would say that the paper type which exhausts fewer resources is the type that

(a) can be produced at a lower cost

(b) can only be sold at a reasonable price when subsidized by the government

(c) can only be produced at a higher cost

(d) is most championed by environmental groups

(e) is most championed by the paper industry

(13) From an economics standpoint, which of the following are scarce resources.

(a) land

(b) fossil fuels

(c) time

(d) water

(e) all of the above

(14) If an externality is created by the production and selling of paper, economists generally state...

(a) government should intervene in the paper market to correct for the externality.

(b) wise government can improve societal welfare by interfering in the paper market, but bad government may make matters worse.

(c) government should not interfere in the market for paper.

(d) all of the above

(15) Some individuals claim that food grown locally, which does not have to be transported as far as non-local foods, is better for the environment because it uses less energy (and hence fossil fuels) in transit. This environmental enhancement is worth the higher price of local food—they claim. An economist would likely reply that...

(a) Because fossil fuels create externalities in the form of air pollution and global warming, local food is definitely the most socially desirable food.

(b) If non-local is cheaper, it might have consumed less fossil fuels on the farm, and less total energy to be produced.

(c) Local food also has the desirable property that it stimulates the local economy.

(d) a, c

(1) *[Ch. 1, pg 26-28]* According to the U.S. government, the value of saving a "statistical life" is...

(a) between 3 million and 7 million dollars

(b) between 15 million and 20 million dollars

(c) over 100 million dollars

(d) less than 1 million dollars

(e) none: you cannot place a dollar value on life

(1) *[Ch. 1, pg 28-31]* Growing obesity in the U.S. appears to be caused by

(a) falling opportunity costs of snacking

(b) falling opportunity costs of being obese

(c) falling opportunity cost of food in general

(d) falling opportunity cost of eating at restaurants, which have fattier food

(e) none of the above

(2) A farmer can make $150, $130, and $120 dollars in profits for each acre of soybeans, cotton, and peanuts produced, respectively. If the profits from growing peanuts rises to $135, how does the opportunity cost of growing soybeans change?

(a) increases to $125

(b) increases to ($130 + $125) / 2 = 127.5

(c) decreases by $5

(d) increases by $5

(e) opportunity cost does not change

(3) A farmer can make $150, $130, and $120 dollars in profits for each acre of soybeans, cotton, and peanuts produced, respectively. If the profits from growing peanuts rises to $125, how does the opportunity cost of growing soybeans change?

(a) increases to $125

(b) increases to ($130 + $125) / 2 = 127.5

(c) decreases by $5

(d) increases by $5

(e) opportunity cost does not change

(4) A farmer can make $300 per acre growing cotton, $250 per acre growing corn, and $225 per acre in profits growing soybeans. Her cost of production for cotton, corn, and soybeans are $200, $180, and $300 per acre, respectively. What is her opportunity cost of growing cotton?

(a) $200 per acre

(b) $250 per acre

(c) $180 per acre

(d) $300 per acre

(e) $225 per acre

(f) $300 per acre

(g) zero

(h) unable to tell from the information given

(5) *Following from the previous question*...Suppose that the profits from soybean production increase to $240. How does this change the opportunity cost of cotton production?

(a) it increases the opportunity cost to $240 per acre

(b) it does not change the opportunity cost

(c) it increases the opportunity cost to $250.

(d) the opportunity cost falls, but how far it falls is ambiguous

(6) *Following from the two questions ago*...Suppose that the profits from soybean production increase to $270. How does this change the opportunity cost of cotton production?

(a) it increases the opportunity cost to $270 per acre

(b) it does not change the opportunity cost

(c) it increases the opportunity cost to $250.

(d) the opportunity cost falls, but how far it falls is ambiguous

(7) A forester is considering allowing her trees to age one more year before harvesting them. If she harvested this year her revenues would be $20,000, but if she waited one more year the harvest revenues would be $22,000. If she harvested the trees today she could earn a 6% risk-free interest rate, without risk, in bond market. What is the opportunity cost of waiting one year to harvest the trees?

(8) The actual, accounting cost of being a prostitute is very low. No offices, workers, or the like are needed. Yet prostitutes consistently make more money their the average working woman. Why doesn't the low accounting cost of being a prostitute translate into low prices and low profits for prostitutes?

(9) A business makes accounting profits. Last year, investors in the business earned a 1% rate-of-return. Yet in reality, the investors took a loss. Explain.

(10) The price of corn is $3.00, the cost of storing corn is $0.05 per bushel per month, and the the risk-free interest rate one can earn over two months is 0.25%. A corn farmer decides to store his corn for two months, anticipating that the price of corn will rise $0.50 per bushel during that time to equal $3.50. What is the opportunity cost of storing corn for two months?

(11) A farmer can make $300 per acre growing cotton, $250 per acre growing corn, and $225 per acre in profits growing soybeans. Her cost of production for cotton, corn, and soybeans are $200, $180, and $300 per acre, respectively. What is her opportunity cost of growing cotton?

(a) $200 per acre

(b) $250 per acre

(c) $180 per acre

(d) $300 per acre

(e) $225 per acre

(f) $300 per acre

(g) zero

(h) unable to tell from the information given

(12) *Following from the previous question*...Suppose that the profits from soybean production increase to $240. How does this change the opportunity cost of cotton production?

(a) it increases the opportunity cost to $240 per acre

(b) it does not change the opportunity cost

(c) it increases the opportunity cost to $250.

(d) the opportunity cost falls, but how far it falls is ambiguous

(13) *Following from the two questions ago*...Suppose that the profits from soybean production increase to $270. How does this change the opportunity cost of cotton production?

(a) it increases the opportunity cost to $270 per acre

(b) it does not change the opportunity cost

(c) it increases the opportunity cost to $250.

(d) the opportunity cost falls, but how far it falls is ambiguous

(14) *Following from the two questions ago*...Suppose that the cost of soybean production increases to $270. How does this change the opportunity cost of cotton production?

(a) it increases the opportunity cost to $270 per acre

(b) it does not change the opportunity cost

(c) it increases the opportunity cost to $250.

(d) the opportunity cost falls, but how far it falls is ambiguous

(15) A forester is considering allowing her trees to age one more year before harvesting them. If she harvested her trees this year her revenues would be $20,000, but if she waited one more year the harvest revenues would be $22,000. The cost of harvesting are $1,000 regardless of when the trees are harvested. If she harvested the trees today she could earn a 6% risk-free interest rate, without risk, in the bond market. What is the opportunity cost of waiting one year to harvest the trees? Should she harvest today or wait one year?

(16) The price of corn is $3.00, the cost of storing corn is $0.05 per bushel per month, and the the risk-free interest rate one can earn over two months is 2.5% (that is not an annual rate, but a rate applied to two months). A corn farmer decides to store his corn for two months, anticipating that the price of corn will rise $0.20 per bushel during that time to equal $3.20. What is the opportunity cost of storing corn for two months? Should he store for two months or should he sell now?

(17) The table below illustrates the rate at which a particular species of tree will grow if allowed to age. Assume that each ton of wood harvested yields a profit of $0.15 per ton per acre. Also assume that money may be invested safely at an interest rate of 3%. Fill in the cells in Columns C, D, and E with with the proper numerical value, and then indicate the optimal harvest age for the tree stand. Use two decimal places everywhere.

Column A Age of Stand In Years	*Column B* Tons Per Acre Harvested From Stand	*Column C* Accounting Profits If Harvested	*Column D* Change in accounting profits from waiting one year to harvest	*Column E* Opportunity cost of foregone 3% investment return
28	12,000		----------	----------
29	14,800			
30	16,000			
31	16,800			
32	17,000			

The optimal age to harvest the tree stand is _____ years.

(18) The table below illustrates the rate at which a particular species of tree will grow if allowed to age. Assume that each ton of wood harvested yields a profit of $0.15 per acre. Also assume that money may be invested safely at an interest rate of 3%. Fill in the cells in Columns C, D, and E with with the proper numerical value, and then indicate the optimal harvest age for the tree stand. Use two decimal places everywhere.

Column A Age of Stand In Years	*Column B* Tons Per Acre Harvested From Stand	*Column C* Accounting Profits If Harvested	*Column D* Change in accounting profits from waiting one year to harvest	*Column E* Opportunity cost of foregone 3% investment return
28	12,000		----------	----------
29	14,800			
30	16,000			
31	16,800			
32	17,000			

The optimal age to harvest the tree stand is _____ years.

(19) Below are data showing how the harvest yield of a Loblolly Pine stand changes with age. Suppose that your accounting profits from the pine stand are $30 per ton harvested. Also suppose that if you harvested the trees and invested the money you could earn a 6% rate-of-return in investments. Complete the table below and determine the optimal age to harvest pine trees.

Age of Stand In Years	Tons Per Acre Harvested From Stand	Accounting Profits If Harvested	Change in accounting profits from waiting one year to harvest	Opportunity cost of foregone 6% investment return
28	30			
29	35			
30	38			
31	40			
32	41			

The optimal age to harvest pine trees is _____ years.

(1) An investment costs $80,000 today and will yield $28,000 in additional revenues/benefits each year for the next three years. That is, you pay $80,000 now, and receive $28,000 after one year; $28,000 after two years; and $28,000 after three years. Assume a 7% interest or discount rate. Fill in the TWO missing blanks below, and indicate whether the investment is profitable by circling the correct answer. The arrows below show you the three places to indicate an answer. Using two decimal places everywhere.

	Cost of Investment	Present Value of Investment Benefit Assuming a 7% Interest Rate
An investment costs $80,000 today, but yields $28,000 in profits each year for the next three years.		
Current Year	$75,000.00	$0
Year 1	$0	$26,168.22
Year 2	$0	$24,456.28
Year 3	$0	BLANK 1: $_____
Sum	$75,000.00	BLANK 2: $_____
This investment is (*circle one*) Profitable / Unprofitable		

(2) An investment costs $75,000 today and will yield $30,000 in additional revenues/benefits each year for the next three years. That is, you pay $75,000 now, and receive $30,000 after one year; $30,000 after two years; and $30,000 after three years. Assume a 5% interest or discount rate. Fill in the TWO missing blanks below, and indicate whether the investment is profitable by circling the correct answer. The arrows below show you the three places to indicate an answer. Using two decimal places everywhere.

	Cost of Investment	Present Value of Investment Benefit Assuming a 5% Interest Rate
An investment costs $75,000 today, but yields $30,000 in profits each year for the next three years.		
Current Year	$75,000.00	$0
Year 1	$0	$28,571.43
Year 2	$0	$27,210.88
Year 3	$0	BLANK 1: $_____
Sum	$75,000.00	BLANK 2: $_____
This investment is (*circle one*) Profitable / Unprofitable		

(1.a) What is the definition of marginal [opportunity] cost?

(a) the opportunity cost of producing one more unit

(c) the opportunity cost of doubling production

(e) the total accounting cost of producing all units divided by the total number of units produced

(b) the accounting cost of producing one more unit

(d) the total opportunity cost of producing all units divided by the total number of units produced

(1.b) What is the definition of marginal product?

(d) the concept that the more one produces the lower the quality of the product

(c) the amount of Product A one gives up to produce one unit of Product B

(e) the contribution of an extra unit of output to total revenues

(b) the additional output realized from a one unit increase in input use

(a) the concept that marginal cost rises the more a firm or industry produces

(2) Why does marginal product decline as input usage rises?

(a) because of forbearance costs

(c) because inputs become less productive the more you use them

(e) all of the above

(b) because the difference between accounting and economic profits is positive

(d) because inputs are cheaper when you buy them in bulk

(3) Why does the marginal cost or supply curve slope upward?

(a) because of forbearance costs

(c) because of the diminishing marginal product

(e) all of the above

(b) because the difference between accounting and economic profits is positive

(d) because marginal product rises the more you produce

(4) How is producer surplus calculated?

(a) total profits not including fixed costs

(c) total revenues minus total variable costs

(e) a, b, c

(b) taking the price a good is sold, adding the marginal cost, and summing these values over all units produced

(d) a,c

(5) If fixed costs for a firm rise, the optimal quantity to produce and sell at any given price will

(a) rise

(b) fall

(c) not change

(6) If fixed costs for a firm fall, the optimal quantity to produce and sell at any given price will

(a) rise

(b) fall

(c) not change

(7) What happens to the marginal value of a good (whether you are purchasing something to consume or purchasing an input into a production process) the more units of the good you purchase.

(a) marginal value falls

(b) marginal value rises

(c) marginal value does not change

(8) How is consumer surplus calculated?

(a) if the product is an input: profits plus fixed costs

(b) if the product is an input: total revenues minus fixed costs

(c) marginal value of a product, minus the price, summed over all units purchased

(d) area above the marginal value curve and below price for all units purchased

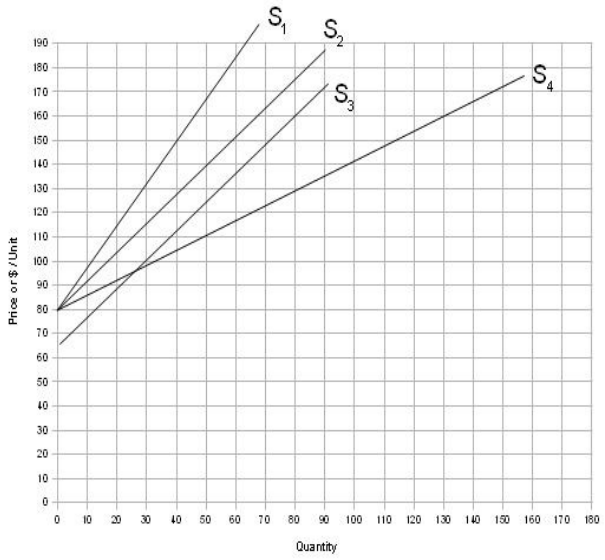
(9) What happens to the marginal value of a good (whether you are purchasing something to consume or purchasing an input into a production process) the less units of the good you purchase.

(a) marginal value falls

(b) marginal value rises

(c) marginal value does not change

Use the right graph to answer questions 23 and 24.



(10) [*From Worksheets on Pages 149-158*] In the figure above, when supply changes from S_4 to S_1, which of the following best describes the change?

(a) the opportunity cost of producing corn ethanol rises

(b) the opportunity cost of producing corn ethanol falls

(c) the marginal value of corn ethanol falls

(d) the marginal value of corn ethanol rises

(11) [*From Worksheets on Pages 149-158*] In the figure above, when supply changes from S_1 to S_2, which of the following best describes the change?

(a) slope decreases
intercept unchanged

(b) slope decreases
intercept decreases

(c) slope increases
intercept increases

(d) slope increases
intercept decreases

(12) Suppose that the marginal cost curve for compost made from chicken litter goes by the following formula: P = 2,555 + 105(Q), where Q is the quantity produced by the compost industry and P is the price. If price equals $6,250, how much will the compost industry produce? Round to zero decimal places.

(a) 50.00

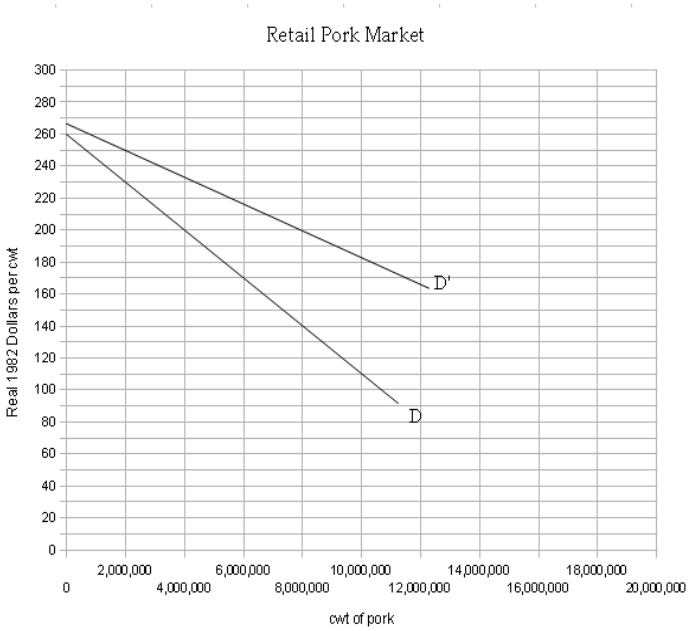
(b) 35.19

(c) 551,250.48

(d) 328,573.00

(e) 845.00

Use the right graph to answer question 26.



(13) Above is a diagram showing an old demand curve D and a new demand curve D' for cage-free eggs. Which set of statements accurately describes this change? Select the ONE correct answer.

(a) Consumers value cage-free eggs more, and at the same price, will buy more

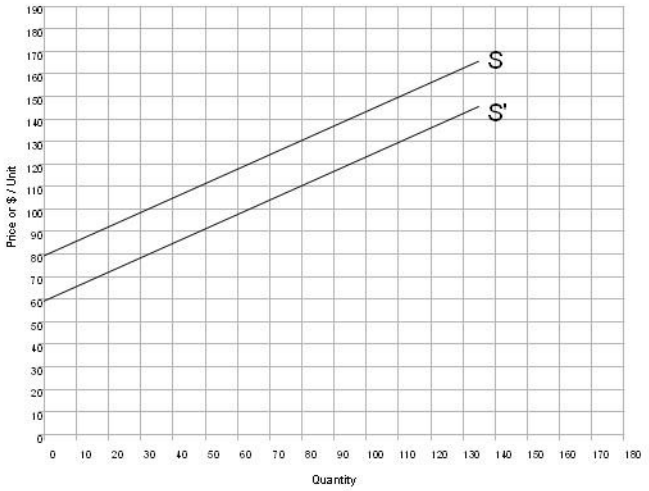
(b) Consumers value cage-free eggs less, and at the same price, will buy less

(c) the cost of producing cage-free eggs has risen

(d) the cost of producing cage-free eggs has fallen

(e) all of the above

Use the right graph to answer questions 23 and 24.



(14) Above is a diagram showing an old supply curve S and a new supply curve S' for corn ethanol. Which of the following statements accurately describes this change? Select the ONE correct answer.

(a) the opportunity cost of producing corn ethanol falls

(b) the opportunity cost of producing corn ethanol rises

(c) the marginal value of corn ethanol falls

(d) the marginal value of corn ethanol rises

(15) Above is a diagram showing an old supply curve S and a new supply curve S' for corn ethanol. Which of the following statements accurately describes this change? Select the ONE correct answer.

(a) the slope of the supply curve falls

(b) the slope of the supply curve rises

(c) the intercept of the supply curve falls

(d) the intercept of the supply curve rises

(16) Suppose that the marginal cost curve for compost made from chicken litter goes by the following formula: P = 1,000 + 105(Q), where Q is the quantity produced by the compost industry and P is the price. If price equals $6,250, how much will the compost industry produce? Round to zero decimal places.

(a) 50

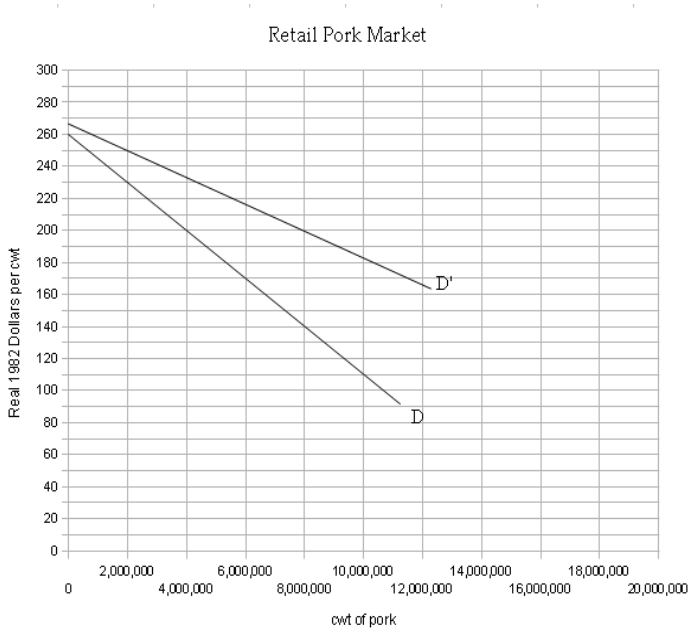
(b) 69

(c) 551,250

(d) 328,573

(e) 845

Use the right graph to answer question 26.



(17) Above is a diagram showing an old demand curve D and a new demand curve D' for cage-free eggs. Which set of statements accurately describes this change? Select the ONE correct answer.

(a) Consumers value cage-free eggs more, and at the same price, will buy more

(b) Consumers value cage-free eggs less, and at the same price, will buy less

(c) the cost of producing cage-free eggs has risen

(d) the cost of producing cage-free eggs has fallen

(e) all of the above

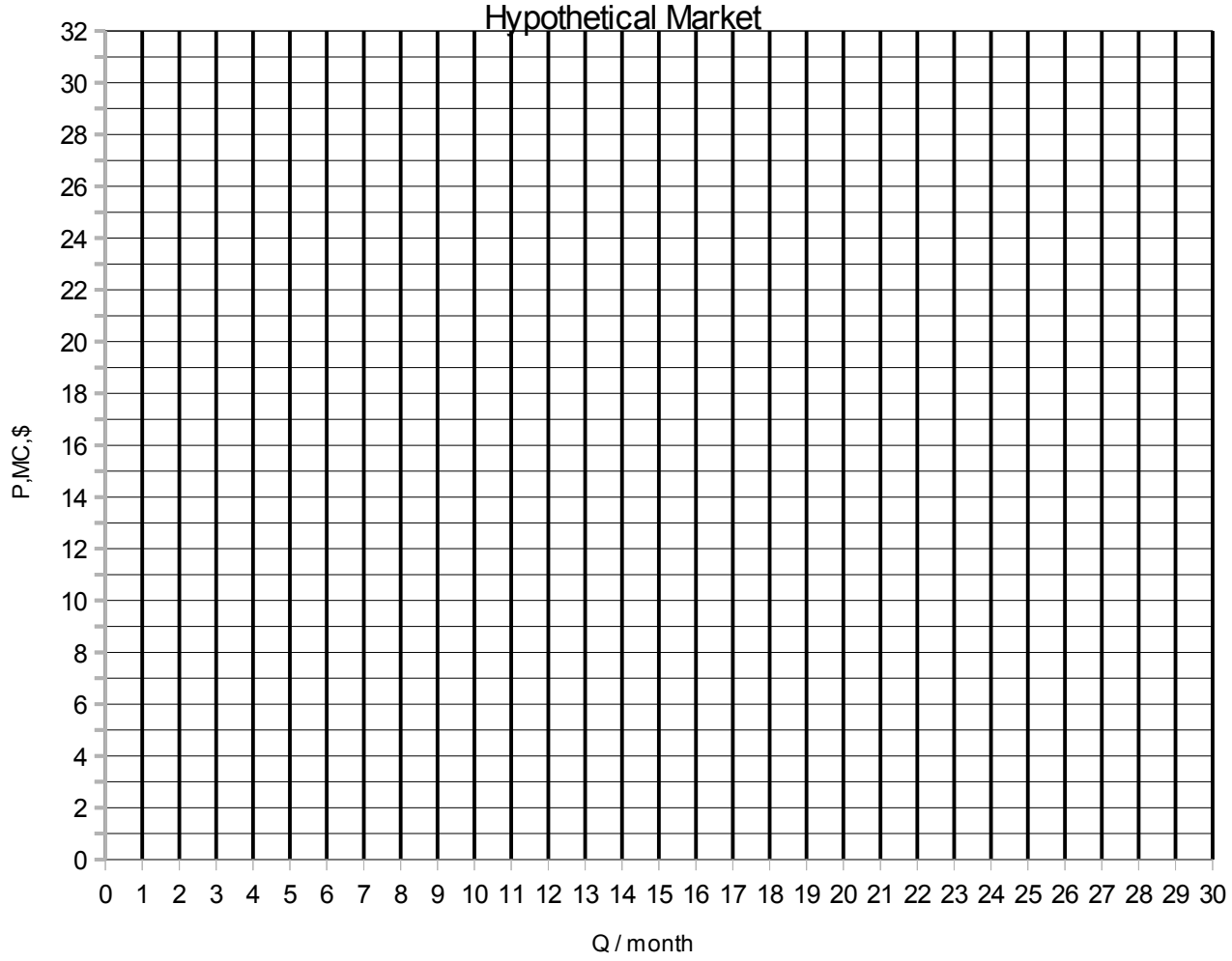
Math / Graphing Questions – Do Not Use Scantron Sheets For This Section

(18) Below is a supply and demand curve for a hypothetical good. Plot both curves in the figure below using bold and solid lines, being as careful and meticulous as possible. Then, indicate the market equilibrium price and quantity using dotted lines and denoting the equilibrium price and quantity as P^E and Q^E, respectively. Your equilibrium prices should be a whole number with no decimal places. Your lines and equilibrium points do not have to be perfectly precise, just close enough that you communicate to us that you know how to graph equations and can identify the market equilibrium.

Supply: P = 6 + 1(Q)

Demand: P = 24 – 1(Q)

Q is quantity per month and P is price per unit of Q



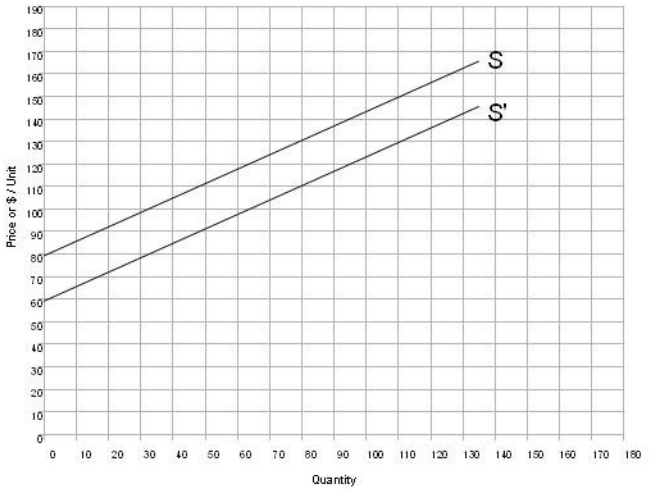
(19) Using the supply and demand curves in Question 27, please indicate the precise equilibrium price and quantity, the producer surplus, and the consumer surplus. The equilibrium price and quantity should be whole numbers with no decimals.

The equilibrium quantity and price is _____ units and _____ $ per unit.

The consumer surplus is $_____ per _____ and producer surplus is $_____ per _____.

(20) Above is a diagram showing an old supply curve S and a new supply curve S' for corn ethanol. Which of the following statements accurately describes this change? Select the ONE correct answer.

Use the right graph to answer questions 23 and 24.



(a) the opportunity cost of producing corn ethanol falls

(b) the opportunity cost of producing corn ethanol rises

(c) the marginal value of corn ethanol falls

(d) the marginal value of corn ethanol rises

(21) Above is a diagram showing an old supply curve S and a new supply curve S' for corn ethanol. Which of the following statements accurately describes this change? Select the ONE correct answer.

(a) the slope of the supply curve falls

(b) the slope of the supply curve rises

(c) the intercept of the supply curve falls

(d) the intercept of the supply curve rises

(22) Suppose that the marginal cost curve for compost made from chicken litter goes by the following formula: P = 1,000 + 105(Q), where Q is the quantity produced by the compost industry and P is the price. If price equals $6,250, how much will the compost industry produce? Round to zero decimal places.

(a) 50

(b) 69

(c) 551,250

(d) 328,573

(e) 845

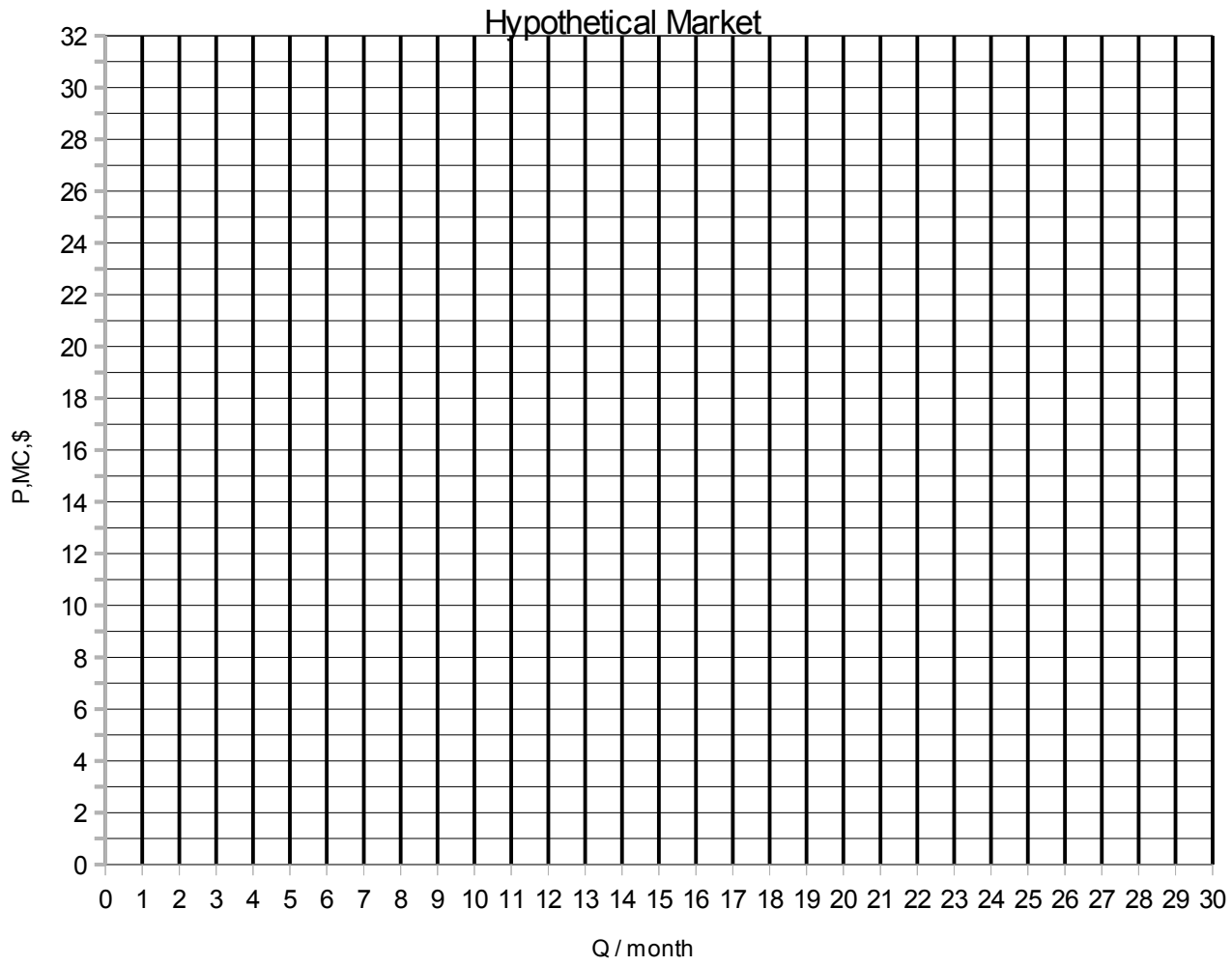
Math / Graphing Questions – Do Not Use Scantron Sheets For This Section

(23) Below is a supply and demand curve for a hypothetical good. Plot both curves in the figure below using bold and solid lines, being as careful and meticulous as possible. Then, indicate the market equilibrium price and quantity using dotted lines and denoting the equilibrium price and quantity as P^E and Q^E, respectively. Your equilibrium prices should be a whole number with no decimal places. Your lines and equilibrium points do not have to be perfectly precise, just close enough that you communicate to us that you know how to graph equations and can identify the market equilibrium.

Supply: P = 2 + 2(Q)

Demand: P = 20 – 1(Q)

Q is quantity per month and P is price per unit of Q



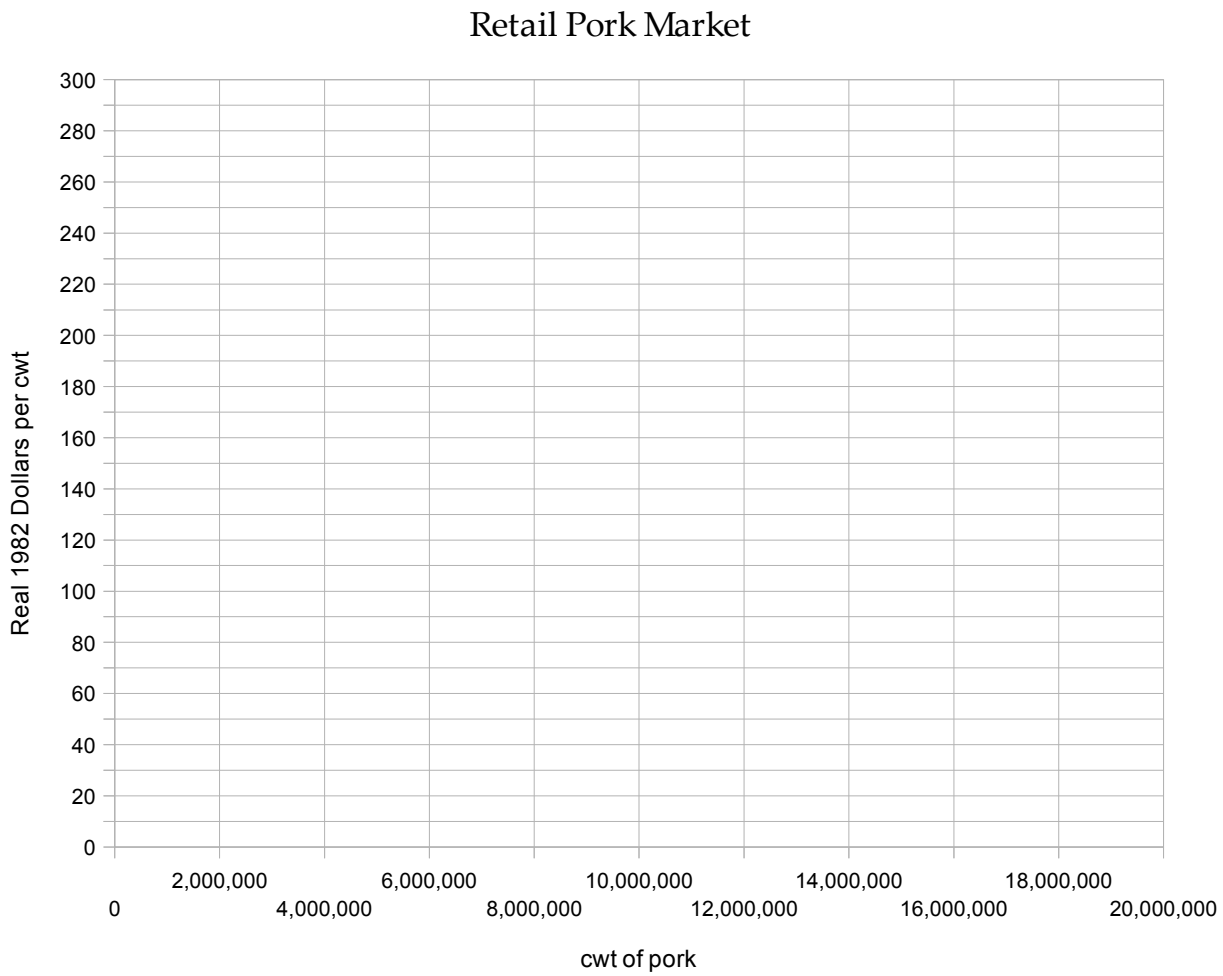
(24) [Worth 3 Points, *From Worksheets on Pages 149-158*] Using the supply and demand curves in Question 26, please indicate the precise equilibrium price and quantity, the producer surplus, and the consumer surplus. The equilibrium price and quantity should be whole numbers with no decimals.

The equilibrium quantity and price is _____ units and _____ $ per unit.

The consumer surplus is $_____ per _____ and producer surplus is $_____ per _____.

The marginal value curve for the retail pork industry is as follows: MV = 250 - 0.000007(Q) where MV is expressed in real 1982 dollars per cwt (100 lbs) and Q refers to to cwt of retail pork produced per month.

(25) Graph the marginal cost curve in the diagram below.



(26) As consumers purchase and consume additional units, the value of each of those units declines. This is the result of...

(a) the same person consuming more units and thus valuing the additional units less

(b) new consumers purchasing the product who value the item less than the first people to purchase it

(c) both

(27) Suppose that the retail pork price is $150 / cwt (where dollars are expressed in real 1982 dollars). Indicate on the graph how much pork consumers will purchase.

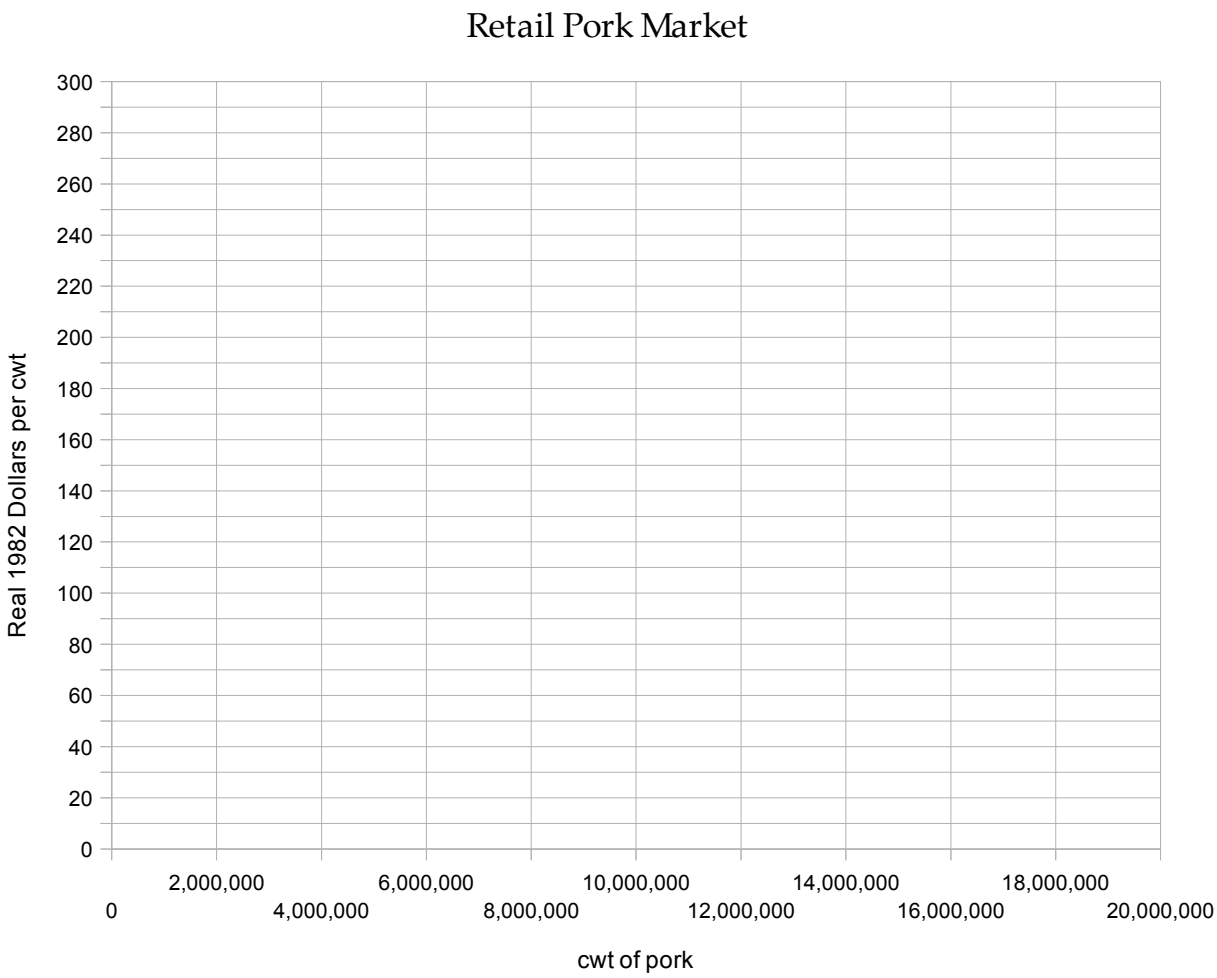
(28) Because the marginal value curve tells us how much the pork consumers will purchase, it is also referred to as a _____ curve. Label the MV curve with a "D" label also.

(29) At the price of $150, what is the value of consumer surplus? Shade in the CS in the figure and calculate it exactly. *Consumer Surplus = $_____ per month.*

(30) Antibiotics are used routinely in hog production. Given regularly at sub-therapeutic levels it promotes growth and reduces mortality. Producers do not benefit very much from antibiotic use, as it increase the supply of pork and reduces pork prices, almost erasing the benefit of the cost decrease. Consumers do benefit though in terms of lower prices. Suppose that due to antibiotic use pork prices fall from $150 / cwt to $130 / cwt. By how much do consumers gain?

(31) If the consumer is purchasing the item as an input into the production and sale of another good, how should consumer surplus be interpreted?

(32) Suppose that the demand curve for pork goes by the formula MV = 250 - 0.000008(Q). Graph this supply curve in the figure below and label it D.
(33) The intercept of the demand curve is _____ and the slope is _____.
(34) Suppose that the price of beef falls, and that pork and beef are substitutes. Consumers are now less enthusiastic about purchasing pork and the value they place on pork falls. Specifically, assume that the marginal value of consuming pork falls by $25 per cwt at all levels of consumption. Graph this new demand curve in the graph below and label it D'.



(35) This question is similar to the previous one. Instead of assuming that the intercept of the marginal value / demand curve falls by $25, suppose that the slope decreases from -0.000008 to -0.000012. Graph this new demand curve in the graph below and label it D''.

(36) Suppose that new studies show that meat in general and pork specifically is more healthy than once thought? Circle all answers that are appropriate responses, and are technically correct.

(a) the intercept of the demand curve could decrease

(b) the *numerical value* of the slope of the demand curve could decrease

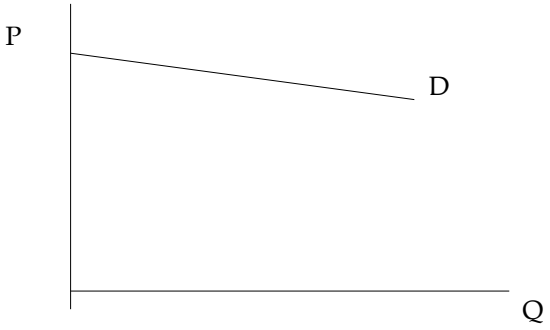
(c) the intercept of the demand curve could increase

(d) the *numerical value* of slope of the supply demand could increase

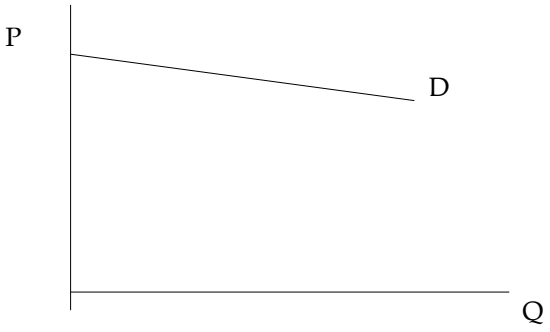
(e) both the intercept and the slope of the marginal value curve could decrease

(f) both the intercept and the slope of the marginal value curve could increase

(37) Below is a demand curve for orange juice. As consumers gain income they tend to purchase more fresh orange juice and are willing to pay more for orange juice. In the graph below, illustrate what happens to the demand for orange juice during a recession when peoples' incomes decrease.



(38) Below is a demand curve for orange juice. Illustrate what happens to the demand for orange juice if the cost of fertilizer for orange trees rises.



The marginal cost curve for the retail pork industry is as follows: MC = 90 + 0.000006(Q) where MC is expressed in real 1982 dollars per cwt (100 lbs) and Q refers to to cwt of retail pork produced per month.

(39) Graph the marginal cost curve in the diagram below.

(40) What type of **opportunity** costs are included in the marginal cost curve?

(a) opp cost of the nitrogen applied to the corn that will feed the hog

(b) opp cost of the veterinary services to keep the hog healthy

(c) opp cost of slaughtering the hog and processing its body into retail pork

(d) opp cost of driving the pork products from a slaughtering plant to a grocery store

(e) opp cost of refrigerators at the grocery store

(f) opp money the farmer gives up not being employed in her next best alternative

(41) Suppose that the retail pork price is $150 / cwt (where dollars are expressed in real 1982 dollars). Indicate on the graph how much pork will be produced.

(42) Because the marginal cost curve tells us how much the pork industry will produce, it is also referred to as a _____ curve. Label the MC curve with a "S" label also.

(43) At the price of $150, what is the value of producer surplus? Shade in the PS in the figure and

calculate it exactly. *Producer Surplus = $_____ per month.*

(44) Producer Surplus describes **economic** profits not including fixed costs from producing and selling pork for which of the following individuals? Assume the pork was ultimately sold at Wal-Mart.

(a) producer of nitrogen that was applied to the soil to produce the corn that was fed to the hog

(b) the hog farmers

(c) the managers and workers at the slaughtering facility

(d) the company who transports wholesale pork to the grocery store

(e) Wal-Mart employees who ultimately sell the pork

(f) all the shareholders of Wal-Mart stock

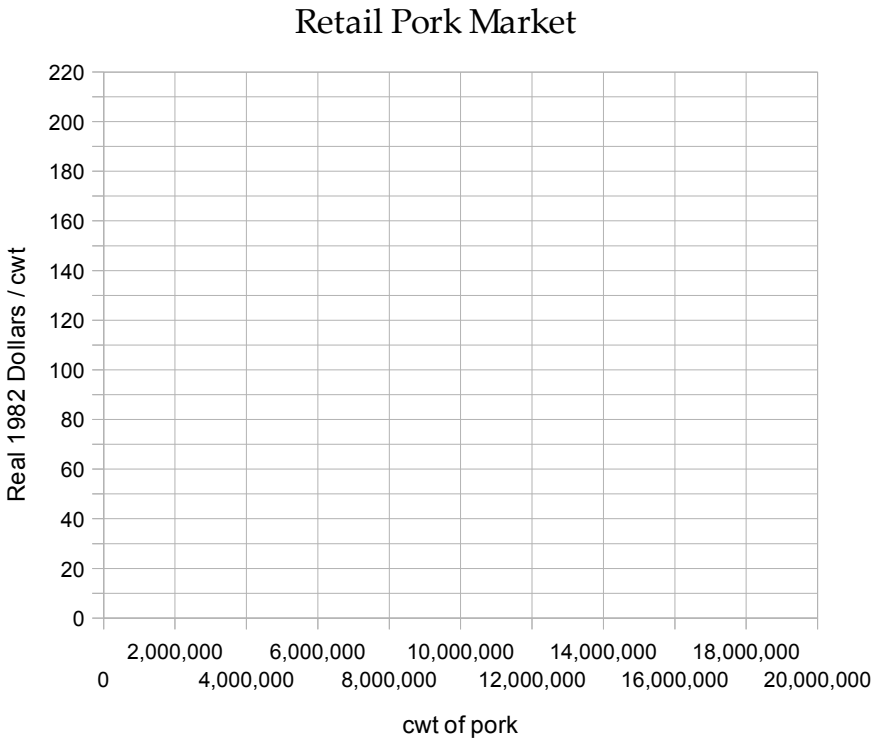
(45) Suppose that a new virus unfortunately called the *Swine Flu Virus* begins infecting many people, and consumers are under the false impression that because of the flu's name it is unsafe to eat pork. In reality, the virus has nothing to do with hogs or pork. Because of the virus, the price of pork falls from $150 to $125 / cwt. To what degree has the pork industry suffered from this unfortunate event? How much money should they be willing to pay for lobbyists to avoid such an incident?

(46) If producers surplus is very low, does this imply that all the businesses involved in pork production are bringing home very little money to their families?

(47) Suppose that the supply curve for pork goes by the formula P = 100 + 0.000008(Q). Graph this supply curve in the figure below and label it S.

(48) The intercept of the supply curve is _____ and the slope is _____.

(49) Then, suppose that the price of oil, natural gas, and fossil fuels in general rise. Because natural gas is used to produce the nitrogen fertilizer which grows the corn and soybeans which feed the hogs that produce the pork, the marginal cost of producing pork rises $25 per cwt at all levels of production. Graph this new supply curve in the graph below and label it S'.



(50) This question is similar to the previous one. Instead of assuming that the intercept of the marginal cost / supply curve rises $25, suppose that the slope increases from 0.000008 to 0.000012. Graph this new supply curve in the graph below and label it S''.

(51) Suppose that the price of corn fell, decreasing the cost of feeding hogs. What would happen to the supply curve of pork? Circle all answers that are appropriate responses, and are technically correct. *You may assume you are starting from question 9 or 11, it doesn't matter.*

(a) the intercept of the supply curve could decrease

(b) the slope of the supply curve could decrease

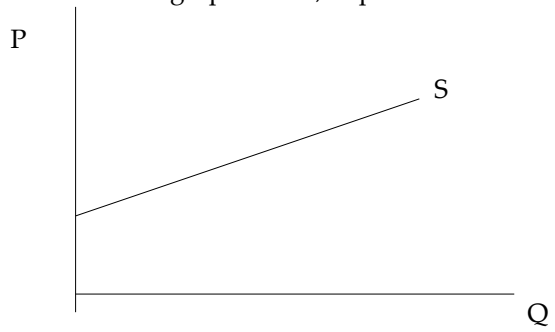
(c) the intercept of the supply curve could increase

(d) the slope of the supply curve could increase

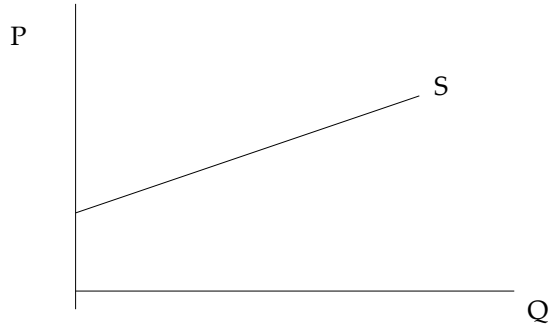
(e) both the intercept and the slope of the marginal cost curve could decrease

(f) both the intercept and the slope of the marginal cost curve could increase

(52) Below is a supply curve for cotton. Assume that land can be used to grow cotton, soybeans, or corn, and that farmers tend to plant whatever is most profitable. Suppose that the price of soybeans declines. For many farmers, soybeans were the next most valuable crop, so this event decreases the opportunity cost of raising cotton. In the graph below, depict how this event would alter the shape of the cotton supply curve.



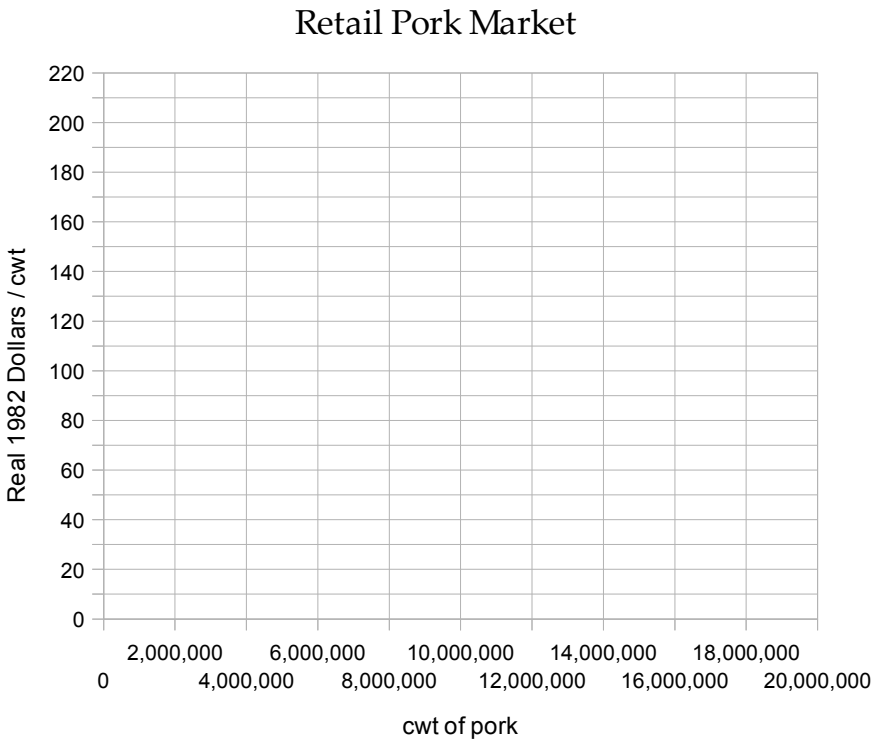
(53) Below is a supply curve for cotton. Suppose that the price of cotton increases. In the graph below, depict how this event would alter the shape of the cotton supply curve.



The supply and demand curves for retail pork are...
Supply: MC,P = 90 + 0.000011(Q)
Demand: MV,P = 210 - 0.000012(Q)
where MC,MV,P are expressed in real 1982 dollars per cwt (100 lbs) and Q refers to to cwt of retail pork produced per month.

(54) Graph the the supply and demand curves in the figure below. Illustrate the equilibrium price as P^E and the equilibrium quantity as Q^E. Calculate the precise equilibrium price and quantity values using algebra also.

Equilibrium Price = _____ Equilibrium Quantity = _____



(55) What is the producer surplus at the equilibrium in #1?

(56) Suppose that due to pork television advertisements the intercept on the pork demand equation increases from 210 to 220. Document how the equilibrium price and quantity change at this new equilibrium.

(57) How does producer surplus change as a result of the pork television advertisements?

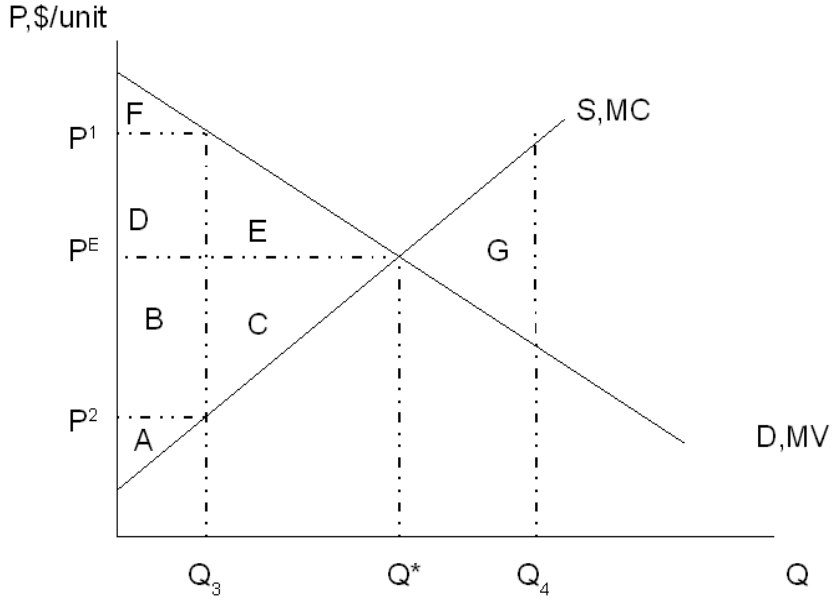
(58) At the old equilibrium, before the television advertisements, if price was $100, instead of the equilibrium price....

quantity supplied would be _____ cwt

quantity demanded would be _____ cwt

and (circle one) *excess demand* / *excess supply* would be _____cwt.

Use the following figure to answer Questions 1-7. Assume no externalities in Questions 1-7.



(1) In a free-market with no governmental interference, what will be the total surplus that represents the benefit society receives from consuming the good of interest?

(a) A + B + C + D + E + F + G (c) A + B + D + F (e) E + C

(b) A + B + C + D + E + F (d) A + B + C + D + E + F - G

(2) In a free-market with no governmental interference, what will be the Consumer Surplus?

(a) F + D + E (c) A + B + C (e) A + B + C + D + E + F -G

(b) F + D + B + A (d) E + C

(3) Suppose that a price ceiling of P^1 is set, such that no buyer or seller may exchange a good at a price greater than P^1. What would be the total surplus?

(a) A + B + C + D + E + F + G (c) A + B + D + F (e) E + C

(b) A + B + C + D + E + F (d) A + B + C + D + E + F - G

(4) Suppose that a price ceiling of P^2 is set, such that no buyer or seller may exchange a good at a price greater than P^2. What would be the total surplus?

(a) A + B + C + D + E + F + G (c) A + B + D + F (e) F + D + B

(b) A + B + C + D + E + F (d) A + B + C + D + E + F - G

(5) If a price ceiling of P^2 is abolished, and the market is allowed to trade at any price or quantity, what will be the change in total surplus?

(a) G (c) -G (e) -E + C

(b) C + E (d) D + B

(6) Suppose that government subsidizes the production of the good. This increases the quantity exchanged from the free-market quantity of Q* to Q4. What would be the total surplus?

(a) A + B + C + D + E + F + G (c) A + B + D + F (e) E + C

(b) A + B + C + D + E + F (d) A + B + C + D + E + F - G

(7) True / False: A price floor of P^1 (which does not allow any price to be set below P^1) reduces surplus because, at this high price, sellers will produce too much of the good, and some units will be produced that cost more than they are valued.

(a) TRUE (b) FALSE

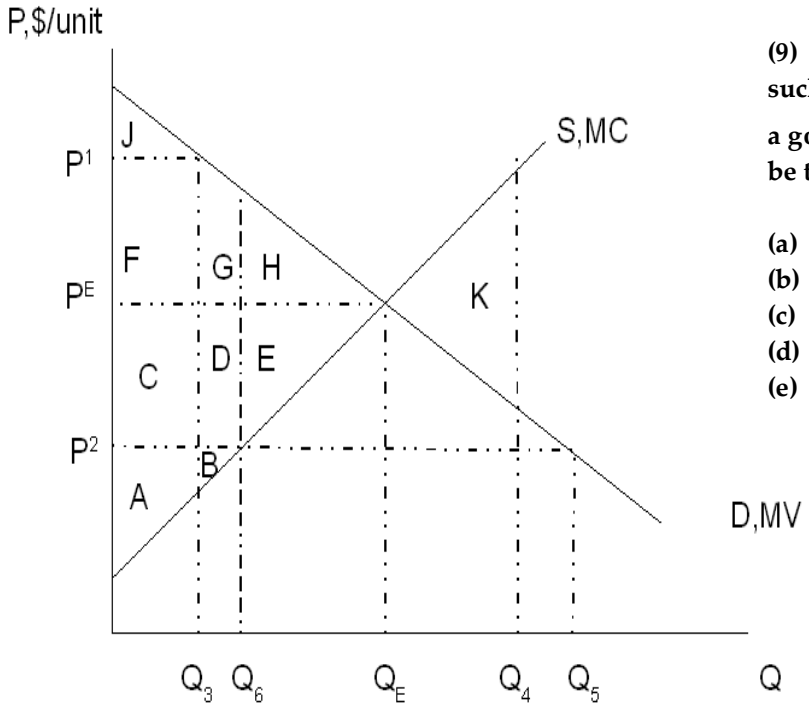
(8) A subsidy encourages more production and consumption, giving people more "stuff" to enjoy. Is this a good thing?

(a) no, because consumers often go into debt to purchase the "stuff", which decreases their purchasing power in the future

(b) no, because the additional production due to the subsidy is valued less than the opportunity cost of producing them

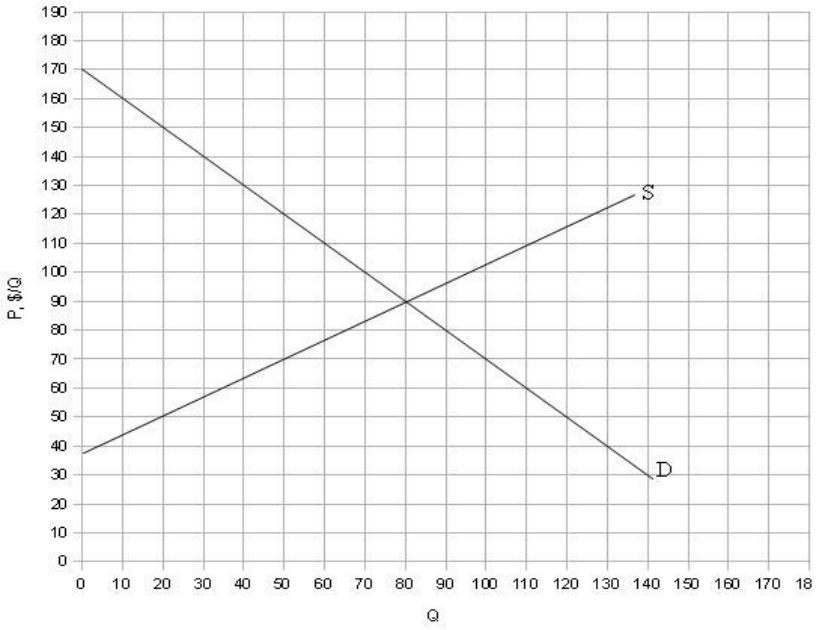
(c) yes, this is why businesses regularly lobby for subsidies

(d) yes, this is why subsidies increase household wealth



(9) Suppose that a price floor is set at P^1, such that no buyer or seller may exchange a good at a price less than P^1. What would be the producer surplus?

(a) A + B + C + D + E
(b) J
(c) A + B
(d) A + B + C + D + F + G + J
(e) A + C + F



(1) Suppose a market is not in equilibrium. Instead, the market price is $70. If the market price is $70, what is the quantity supplied and quantity demanded?

(a) Quantity Supplied = 100
Quantity Demanded = 50

(b) Quantity Supplied = 70
Quantity Demanded = 120

(c) Quantity Supplied = 120
Quantity Demanded = 70

(d) Quantity Supplied = 50
Quantity Demanded = 100

(e) none of the above

(2) What happens to the market equilibrium price and quantity if the demand increases (demand curve shift up; demand curve shifts right)?

(a) Price Increases
Quantity Increases

(b) Price Increases
Quantity Decreases

(c) Price Decreases
Quantity Increases

(d) Price Decreases
Quantity Decreases

(e) Price Change Ambiguous
Quantity Decreases

(3) What happens to the market equilibrium price and quantity if the supply increases (supply curve shifts down; supply curve shifts right)?

(a) Price Increases
Quantity Increases

(b) Price Increases
Quantity Decreases

(c) Price Decreases
Quantity Increases

(d) Price Decreases
Quantity Change Ambiguous

(e) Price Change Ambiguous
Quantity Decreases

(4) What happens to the market equilibrium price and quantity if the supply decreases (supply curve shifts up; supply curve shifts left)?

(a) Price Increases
Quantity Increases

(b) Price Increases
Quantity Decreases

(c) Price Change Ambiguous
Quantity Increases

(d) Price Decreases
Quantity Decreases

(e) Price Change Ambiguous
Quantity Decreases

(5) What happens to the market equilibrium price and quantity if the demand decreases (demand curve shift down; demand curve shifts left)?

(a) Price Change Ambiguous
Quantity Increases

(b) Price Increases
Quantity Change Ambiguous

(c) Price Decreases
Quantity Increases

(d) Price Decreases
Quantity Decreases

(e) Price Change Ambiguous
Quantity Decreases

(6) What happens to the market equilibrium price if the demand decreases (demand curve shift down; demand curve shifts left) and supply decreases (supply shifts up; supply shifts left)?

(a) Price Rises (b) Price Falls (c) Price Change is Ambiguous

(7) What happens to the market equilibrium price if the demand decreases (demand curve shift down; demand curve shifts left) and supply increases (supply shifts down; supply shifts right)?

(a) Price Rises (b) Price Falls (c) Price Change is Ambiguous

(8) What happens to the market equilibrium quantity if there is a <u>small</u> demand increase and a <u>large</u> supply increase?

(a) Quantity Rises (b) Quantity Falls (c) Quantity Change is Ambiguous

(9) Suppose that the price of a good increases while the quantity of the good produced/ purchased decreases. Which of the following could, without a doubt, cause this change?

(a) demand increases
supply increase

(b) no change in demand
supply decreases

(c) no change in demand
supply increases

(d) demand increases
no change in supply

(e) a,b

(10) Recent technological advancements have allowed firms to pump natural gas from areas that historically were too difficult to reach. This decreases the cost of producing / selling natural gas, causing which following change in the supply or demand for natural gas?

(a) causes demand curve to increase (shift up; shift right)

(b) causes supply curve to increase (shift down; shift right)

(c) causes demand curve to decrease (shift down; shift left)

(d) causes supply curve to decrease (shift up; shift left)

(11) New health studies report that foods high in fiber have many health benefits. This causes what following change in the supply or demand for high-fiber cereal?

(a) causes demand curve to increase (shift up; shift right)

(b) causes supply curve to increase (shift down; shift right)

(c) causes demand curve to decrease (shift down; shift left)

(d) causes supply curve to decrease (shift up; shift left)

(12) The textbook states that the demand elasticity for for beer is -0.3. Consequently, a 1% increase in the price of beer will cause consumer purchases to change by

(a) -0.3%

(b) 0.3%

(c) 1/(-0.3) = -3.3333%

(d) 1/(0.3) = 3.3333%

(e) -1%

(13) The textbook states that the demand elasticity for for liquor is -1.5. Consequently, a 10% decrease in the price of liquor will cause consumer purchases to change by

(a) -15%

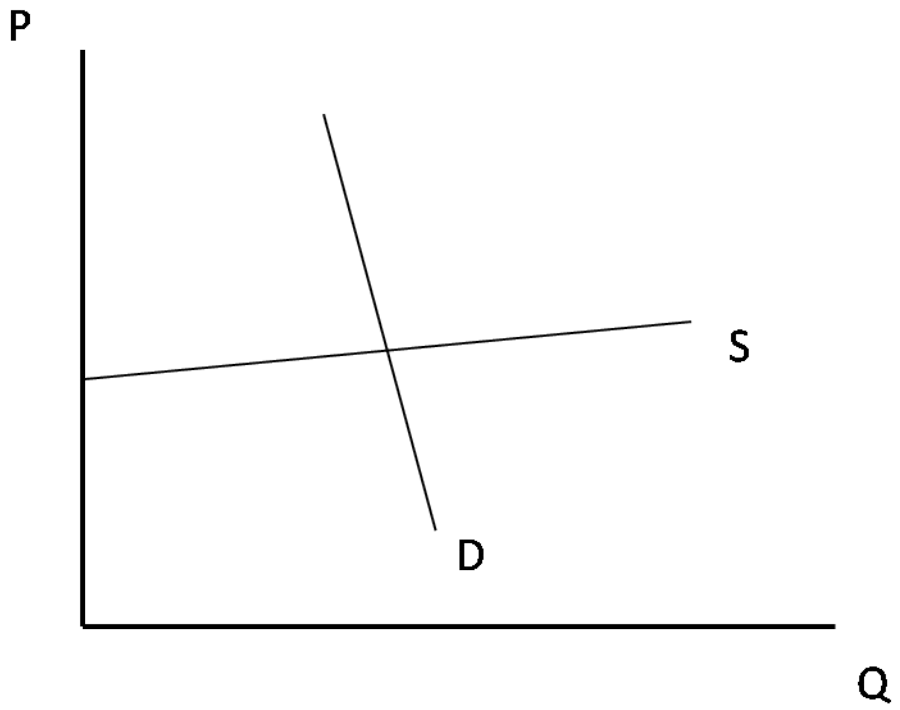
(b) 15%

(c) 0.34%

(d) -0.34%

(e) -43%

Use the figure below to answer Questions 27 & 28.



(14) The figure above contains a supply and demand curve. The demand curve looks to be (Blank 1)_____ and the supply curve looks to be (Blank 2) _____.

(a) Blank 1: *elastic*
Blank 2: *elastic*

(b) Blank 1: in*elastic*
Blank 2: in*elastic*

(c) Blank 1: in*elastic*
Blank 2: *elastic*

(d) Blank 1: *elastic*
Blank 2: in*elastic*

(15) In the figure above, the elasticity of demand looks to be (Blank 1) _____ and the elasticity of supply looks to be (Blank 2) _____.

(a) Blank 1: larger than -1 (like -0.2)
Blank 2: larger than 1 (like 3.0)

(b) Blank 1: smaller than -1 (like -3.0)
Blank 2: smaller than 1 (like 0.2)

(c) Blank 1: smaller than -1 (like -3.0)
Blank 2: larger than 1 (like 3.0)

(d) Blank 1: larger than -1 (like -0.2)
Blank 2: smaller than 1 (like 0.2)

(16) To placate animal rightists, the government passes regulations forcing egg producers to replace cage egg facilities with cage-free facilities. This will increase the cost of egg production significantly. Assume that the demand for eggs is very inelastic while the supply is very elastic. These regulations will cause the (Blank 1)_____ of eggs to (Blank 2)_____ greatly, and the (Blank 3)_____ of eggs to (Blank 4)_____ only slightly.

(a) Blank 1: price
Blank 2: fall
Blank 3: quantity
Blank 4: rise

(b) Blank 1: quantity
Blank 2: rise
Blank 3: price
Blank 4: fall

(c) Blank 1: quantity
Blank 2: fall
Blank 3: price
Blank 4: rise

(d) Blank 1: price
Blank 2: rise
Blank 3: quantity
Blank 4: fall

(17) Suppose that the demand for fatty foods is very elastic. If politicians tax fatty foods, ….?

(a) the tax will curb consumption of fatty foods considerably, but raise few tax revenues

(b) the tax will not curb consumption of fatty foods much, but will raise considerable tax revenues

(c) the tax will neither curb fatty food consumption nor will it raise much tax revenues

(d) the tax will curb fatty food consumption considerably and will raise large tax revenues

(18) Suppose that the demand for water rises due to the fact that homeowners place an increasingly high value on attractive lawns. If the supply of water is very (Blank 1) _____, a demand increase will increase water prices by a large amount but will increase water usage by only a small amount. In the long-run, supply will become more (Blank 2) _____, which dampens the degree to which water prices increase.

(a) Blank 1: inelastic
Blank 2: inelastic

(b) Blank 1: elastic
Blank 2: elastic

(c) Blank 1: inelastic
Blank 2: elastic

(d) Blank 1: elastic
Bland 2: inelastic

(19) In the long-run, demand is _____ _____, because in the long-run consumers have more time to explore alternative ways of dealing with higher or lower prices?

(a) more elastic

(b) less elastic

(c) more grunable

(d) more ingrunable

For the next two questions, assume gasoline is a constant cost industry, and the minimum cost of producing gasoline is $2.50 per gallon.

(20) Due to a demand increase, the price of gasoline rises to $4.00 per gallon in the short-run. What will happen to the price of gasoline in the long-run?

(a) Because price is higher than the minimum cost, more gasoline will be produced, driving prices permanently below $2.50 per gallon.

(b) The price will be less than $2.50 as gasoline producers go out of business.

(c) Because the price is higher than the minimum cost, more gasoline will be produced, driving prices back down to $2.50 per gallon.

(d) The price will be higher than $2.50.

(21) If price falls below the minimum average cost of $2.50 per gallon, ….?

(a) firms will enter the market, increasing gasoline production and driving down price.

(b) firms will exit the market, decreasing production and driving up price.

(c) firms will enter the market, decreasing gasoline production and driving up price.

(d) firms will exit the market, increasing production and driving down price.

(22) What distinguishes the long-run from the short-run?

(a) firms can avoid more regulations in the short-run

(b) the number of firms is fixed in the short-run, but can be changed in the long-run

(c) marginal costs are subject to axomorony in the long-run but not the short-run

(d) production costs are always lower in the short-run

(23) Some individuals claim that food grown locally is better for the environment. However, local food is more expensive because the cost of production at the farm is much larger. Their reasoning is that the shorter distance food travels between farm and kitchen entails less fossil fuel usage, and hence less air pollutants. These individuals ask you (someone who had economics under Dr. Norwood) what you think. What might a good economists state?

(a) If local food is more expensive, it must be that the farm used more environmentally friendly production methods.

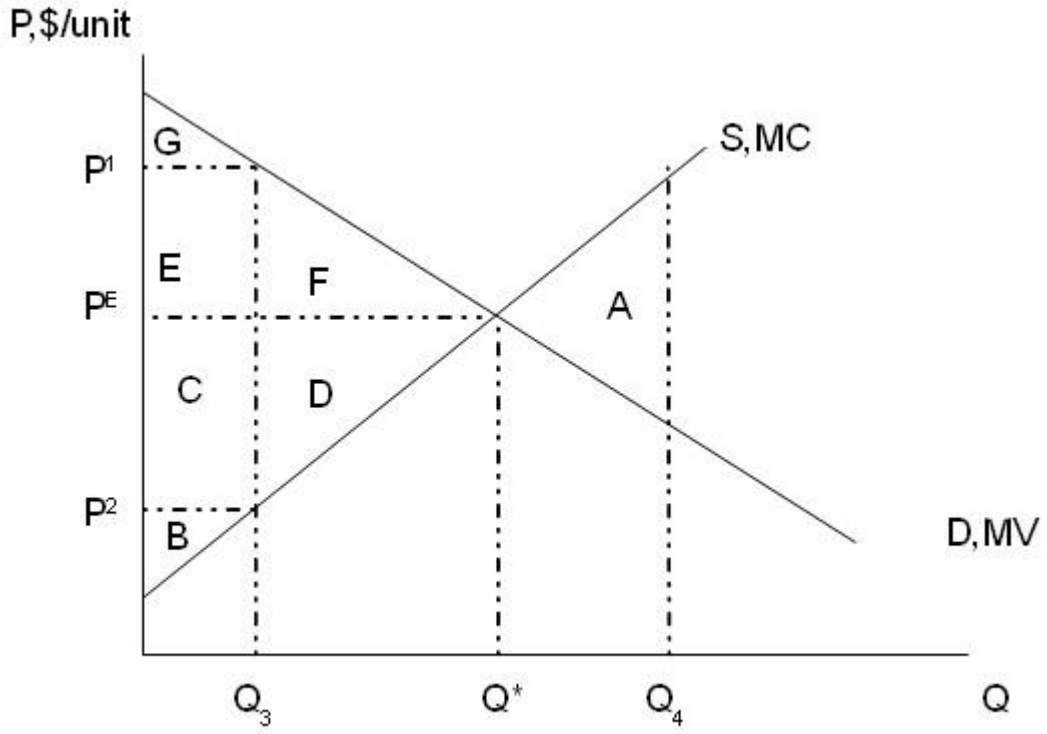
(b) Local food also has the property that it stimulates the local economy.

(c) If local food is more expensive, it might be because more fossil fuels were used on the farm, possibly negating the fewer fossil fuels used in transporting the food.

(24) You are a seed business that currently charges $5,000 for each ton of seed you sell, and at that price you sell 150 tons. The elasticity of demand for your seeds, economic consultants tell you, is -0.4. Your variable costs of production are $3,000 for each ton.

Should you raise the price of your good to $6,500 per unit? Show your work in case we decide to reward partial credit (which we may or may not do).

Use the illustration below to answer the next three questions.



(25) In a free-market with no governmental interference, what will be the total surplus that represents the benefit society receives from consuming the good of interest.

(a) B+C+E+G (c) B+C+D+E+F+G + A (e) B+C+D+E+F+G

(b) B (d) B+C+D+E+F+G - A

(26) Suppose that a price ceiling is established by the government, dictating that price cannot under any circumstances exceed P^2. What is the corresponding total surplus?

(a) B+C+E+G (c) B+C+D+E+F+G + A (e) B+C+D+E+F+G

(b) B (d) B+C+D+E+F+G - A

(27) Suppose that the government subsidizes consumption of the good by giving consumers a certain amount of extra money each time they purchase a unit of the good. Suppose further this subsidy increases consumption of the good to Q_4. What is the corresponding total surplus?

(a) B+C+E+G (c) B+C+D+E+F+G + A (e) B+C+D+E+F+G

(b) B (d) B+C+D+E+F+G - A

(28) A subsidy encourages more production and consumption, giving people more "stuff" to enjoy. Isn't this a good thing?

(a) yes, this is why subsidies increase household wealth

(b) yes, this is why businesses regularly lobby for subsidies

(c) no, because people give up consumption of other goods they value more to pay for the subsidy

(d) no, because consumers often go into debt to purchase the "stuff", which decreases their purchasing power in the future

(e) a,b

(29) A government who is considering enacting a price ceiling for gasoline (meaning the government forbids businesses from charging a price higher than the price ceiling) should bear in mind that...

(a) the price ceiling will reduce the total wealth of the economy

(b) consumers will want less than sellers want to provide, creating waiting lines

(c) everyone will benefit from the low prices, but the benefit will be small

(d) some units will be produced where the cost of the good is greater than its value

(e) c,d

(30) Suppose that sales of a product decrease from 50,000 per year to 35,000 per year. What is the percentage change in sales?

(a) 43%

(b) 0.43%

(c) -43%

(d) -30%

(e) 0.30%

(31) Suppose that the demand elasticity for a feed supplement is -.25. If price falls 15%, what is the percentage change in quantity demanded?

(a) -6%

(b) 0.0375%

(c) -0.0375%

(d) -3.75%

(e) 3.75%

(32) If the demand elasticity for soda is -0.2 we say demand is _____, whereas if its elasticity was -2 we would say the demand is _____.

(a) inelastic, elastic

(b) inelastic, inelastic

(c) elastic, elastic

(d) elastic, inelastic

(33) The government is considering taxing sodas and fatty foods. Politicians say they are trying to curb obesity, when in reality, they are just trying to raise tax revenues. To achieve their goals, these politicians should keep in mind that...

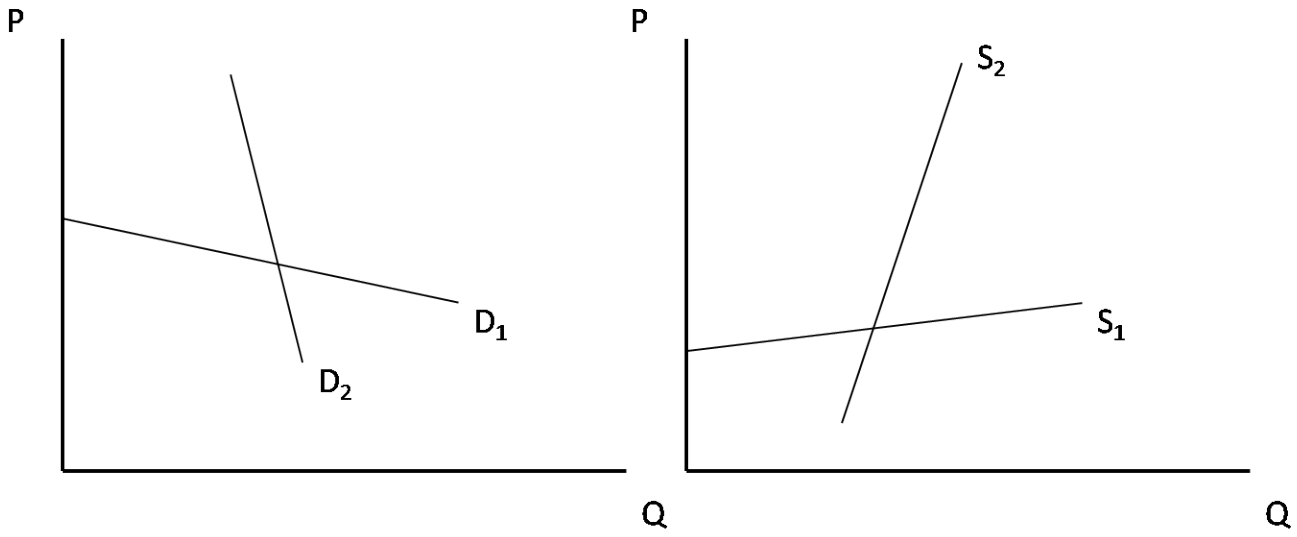
(a) subsidies can do a much better job of raising revenues than taxes

(b) price controls can do a much better job of raising revenues than taxes

(c) if the tax is placed on a good with an elastic demand, they will deter consumption so much that little tax revenues will be raised

(d) if the tax is placed on a good with an elastic demand consumers will purchase virtually the same amount, generating large tax revenues

Use the following illustration to answer Questions 10 and 11.



(34) The demand curve D_2 is best described as an _____ demand, and the supply curve S_2 is best described as an _____ supply.

(a) inelastic, elastic

(b) inelastic, inelastic

(c) elastic, elastic

(d) elastic, inelastic

(35) Of the four curves (D_1, D_2, S_1, S_2), which curves are most likely to be the long-run supply and long-run demand curves?

(a) D_1,S_1

(b) D_2,S_2

(c) D_1,S_2

(d) D_2,S_1

(36) The demand for eggs in general is most likely to be _____, while the demand for a single variety of eggs is most likely to be _____.

(a) inelastic, elastic
(b) inelastic, inelastic
(c) elastic, elastic
(d) elastic, inelastic

(37) Suppose that more stringent federal regulations increase the cost of production, acting like a tax and thereby decreasing the supply of the good. If the demand for the good is very elastic, these regulations will _____ a lot but _____ only a little.

(a) increase price, decrease quantity
(b) increase price, increase quantity
(c) decrease quantity, decrease price
(d) decrease quantity, increase price

(38) Suppose that the government taxes high quality health care plans. You may assume that the demand for these plans is inelastic while the supply is elastic. Who pays the majority of this tax, consumers or insurance companies, and why?

(a) consumers will pay most of the tax because the price will increase almost as much as the tax
(b) consumers will pay most of the tax because most of them will switch to low quality health care plans.
(c) insurance companies will pay most of the tax because they will be unable to pass the tax onto consumers in the form of a higher price
(d) insurance companies will pay most of the tax because, as consumers switch to lower quality plans in large numbers, they will lose the profits from those high quality plans.

(39) Suppose that gasoline prices rise, and this price rise is sustained over a long period. How will consumers respond to this price rise in the long-run and short-run.

(a) demand will be more elastic in the long-run than the short-run
(b) in the short-run, consumers will purchase roughly the same amount of gas, but over time they will identify feasible ways to curtail their gas consumption, and in the long-run will decrease their purchases by a larger amount.
(c) in the short-run consumers will overreact to the price change and curtail their consumption greatly, but in the long-run they will return to their previous level of gasoline purchases.
(d) both a and b
(e) both a and c

(40) Which distinguishes the long-run from the short-run?

(a) firms can avoid more regulations in the short-run

(b) the number of firms is fixed in the short-run, but can be changed in the long-run

(c) marginal costs are subject to axomorony in the long-run but not the short-run

(d) fixed costs are lower in the short-run than the long-run

(e) marginal costs for a firm are lower in the short-run than the long-run

(41) Politicians favor taxing cigarettes because the tax appears to raise significant revenues when it is initially administered. Being an economist, you think the politician would be interested to know that...

(a) demand is more elastic in the long-run, and hence the tax revenues will be less in the future

(b) the tax will force some sellers out of business, causing price to rise even higher than the amount of the tax, thereby increasing tax revenues further

(c) the tax will force some sellers out of business, leading to mergers and monopoly power in the cigarette industry

(d) demand is more inelastic in the long-run, and hence tax revenues will be even greater in the future

(42) In the long-run, how will an increase in demand affect the price and quantity of a good in a constant cost industry.

(a) price will remain the same, quantity will fall

(b) price will remain the same, quantity will rise

(c) price will fall, quantity will remain the same

(d) price will rise, quantity will remain the same

(e) price will rise, quantity will rise

(43) Suppose that, today, it costs a farmer a minimum of $80 per cwt to raise cattle and cattle is a constant cost industry. Then, suppose that the demand for cattle rises and this demand increase is sustained over time. Which of the following best describes the industry transition to a new long-run equilibrium?

(a) new firms will enter the market to capture profits, increasing supply, and thereby decreasing price back to its original level

(b) new firms will enter the market, increasing supply and increasing the market price further

(c) price will initially rise, discouraging firms and causing them to exit the industry

(d) firms will exit the industry, causing price to remain high

(44) Milk prices are currently unusually high, bestowing dairy producers with large profits. Why would an economist naturally suspect that these prices and profits will be temporary?

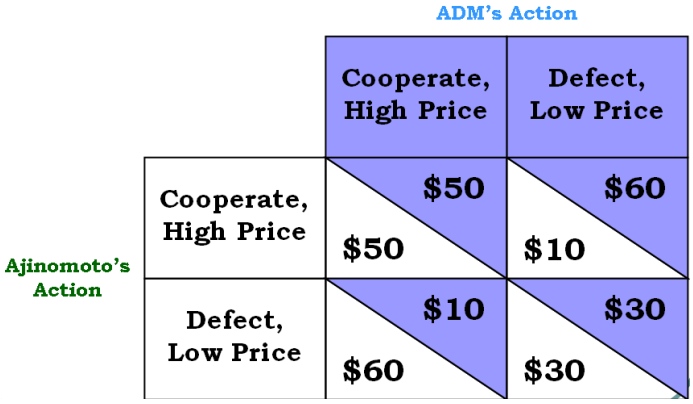
(a) because all the fixed costs that are ignored in the short-run become variable costs in the long-run

(b) because profits induce new dairy farms to be built, increasing milk supplies and decreasing price

(c) because there is a coordination problem between costs and price, and high prices are universally followed by higher costs

(d) because at high prices consumers will consume less milk, decreasing demand and hence dairy profits

Use the figure below to answer the next three questions
The figure below depicts a one-shot price setting game. I repeat, assume that this game is played only once.



(1) In the one-shot price setting game, the dominant strategy for ADM and Ajinomoto is to do what?

(a) ADM: high price
Ajinomoto: high price

(b) ADM: high price
Ajinomoto: low price

(c) ADM: low price
Ajinomoto: high price

(d) ADM: low price
Ajinomoto: low price

(2) In the one-shot price setting game, what is the Nash Equilibrium?

(a) ADM: high price
Ajinomoto: high price

(b) ADM: high price
Ajinomoto: low price

(c) ADM: low price
Ajinomoto: high price

(d) ADM: low price
Ajinomoto: low price

(3) In the one-shot price setting game, if the two firms could legally collude and create enforceable legal contracts dictating each firm's price, what price would each business charge.

(a) ADM: high price
Ajinomoto: high price

(b) ADM: high price
Ajinomoto: low price

(c) ADM: low price
Ajinomoto: high price

(d) ADM: low price
Ajinomoto: low price

(4) A dominant strategy is defined as a strategy that

(a) is a superior strategy regardless of the opponent's strategy

(b) is a superior strategy given the opponent's strategy

(c) is a superior strategy when enforceable, legal contracts are allowed

(d) is a superior strategy when tacit collusion occurs

(5) In strategic games, a _____ Equilibrium does not always exist, but a _____ Equilibrium usually does exist.

(a) Blank 1: Hayek
Blank 2: Friedman

(b) Blank 1: Dominant Strategy
Blank 2: Nash

(c) Blank 1: Marshall
Blank 2: Dominant

(d) Blank 1: Prequel
Blank 2: Sequel

Use Figure 2 and the information below to answer the next two questions.

Figure 2 display a game we studied in a class quiz. In a little town of Barnwell there exists only two beer stores: Barn's Liquor Store and Brown's Bottle Shop. Assume there will never be any entry of a third firm. The stores have the decision of whether to refrigerate the beer within their store or not. Consumers prefer refrigerated beer, and if one store refrigerates while the other does not, the vast majority of consumers will patronize the store with refrigerated beer. However, if both stores decide not to refrigerate beer, they sell roughly the same amount of beer without incurring the large expense of refrigeration.

Figure 2. Beer Refrigerator Game (profits in thousands per year)

		Barn's Liquor Store: Do Not Refrigerate Beer	Barn's Liquor Store: Refrigerate Beer
Brown's Bottle Shop	Do Not Refrigerate Beer	$22 / $20	$32 / $6
Brown's Bottle Shop	Refrigerate Beer	$5 / $35	$12 / $10

(6: follows from Figure 2) What is the dominant strategy equilibrium for each stores?

(a) Brown's: refrigerate
Barn's: refrigerate

(b) Brown's: do not refrigerate
Barn's: do not refrigerate

(c) Brown's: do not refrigerate
Barn's: refrigerate

(d) Brown's: refrigerate
Barn's: do not refrigerate

(e) there is no dominant strategy equilibrium

(7: follows from Figure 2) Suppose that Nathan Anderson is the Mayor of Barnwell and is a serious [and literal] buzz-kill. Presumably to discourage excessive of alcohol occurring immediately outside beer stores, Mayor Anderson proposes a bill that would prohibit both beer stores from selling refrigerated beer. Will the two stores approve or disapprove of the measure?

(a) approve

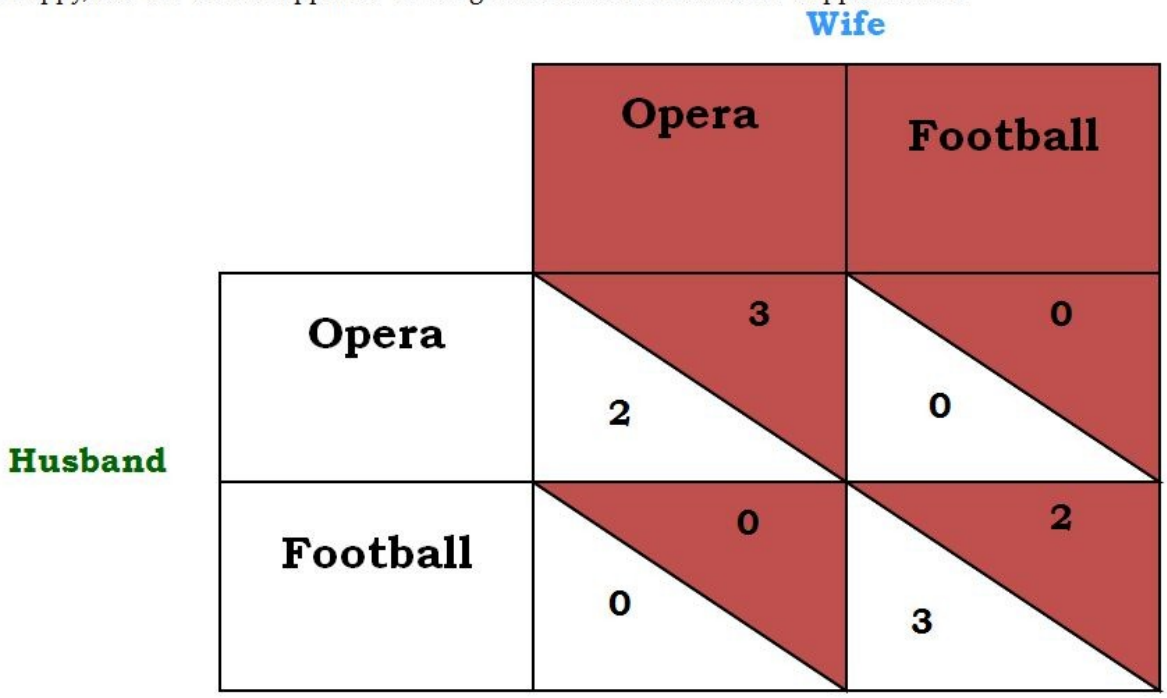
(b) disapprove

(c) no way to tell

Use the figure and information below to answer the next question.

Battle of the Sexes

Imagine a couple that agreed to meet this evening, but cannot recall if they will be attending the opera or a football match. The husband would most of all like to go to the football game. The wife would like to go to the opera. Both would prefer to go to the same place rather than different ones, because they enjoy the company of each other more than they enjoy the football match/opera. If they cannot communicate, where should they go? The outcome of the game is a simple number denoting happiness. For example, if the wife goes to the opera and the husband goes to football, they each receive an outcome of zero, meaning they are not happy. However, if they both go to the opera they are happy, but the wife's happiness of 3 is greater than the husband's happiness of 2.



(8) What is the Nash Equilibrium in the *Battle of the Sexes Game?*

(a) Wife: Opera
Husband: Opera

(b) Wife: Football
Husband: Football

(c) Wife: Football
Husband: Opera

(d) Wife: Opera
Husband: Football

(e) both (a) and (b)

(9) This describes a practice where a business initially charges high prices, but then lowers the price substantially if its competitors charge a low price.

(a) trigger pricing (c) tacit collusion (e) Folk

(b) low-price guarantee (d) tit-for-tat

(10) This describes a practice where a business initially charges high prices, and then publicly states (perhaps through newspaper advertisements) that it will match any competitor's price.

(a) trigger pricing (c) tacit collusion (e) Folk

(b) low-price guarantee (d) tit-for-tat

(11) This is an unspoken but understood agreement between firms to charge high prices and not try to under-cut each other on price.

(a) trigger pricing (c) tacit collusion (e) Folk

(b) low-price guarantee (d) tit-for-tat

(12) This is a theorem showing that, if the price-setting game is placed an infinite number of times and players are rational, they will develop cooperate strategies whereby they both charge high prices.

(a) trigger pricing (c) tacit collusion (e) Folk

(b) low-price guarantee (d) tit-for-tat

(13) In 1980, Robert Axelrod (a political scientist) held a contest regarding differing strategies in the repeating-price-setting game. The _____ strategy won the contest, and was deemed to be the most profitable strategy.

(a) trigger pricing (c) tacit collusion (e) Folk

(b) low-price guarantees (d) tit-for-tat

The following is a series of statements regarding an industry, with particular attention towards the ability of the industry to engage in tacit collusion. Your job is to determine whether each statement is true or false.

(14) Three grocery stores service a town, and the owners and managers of those three grocery stores tend to stay under the same ownership and management.
***True/False*: This facilitates tacit collusion.**

(a) TRUE (b) FALSE

(15) Three grocery stores service a town, and the owners and managers of those three grocery stores have extensive experience in tacit collusion.
***True/False*: This facilitates tacit collusion.**

(a) TRUE (b) FALSE

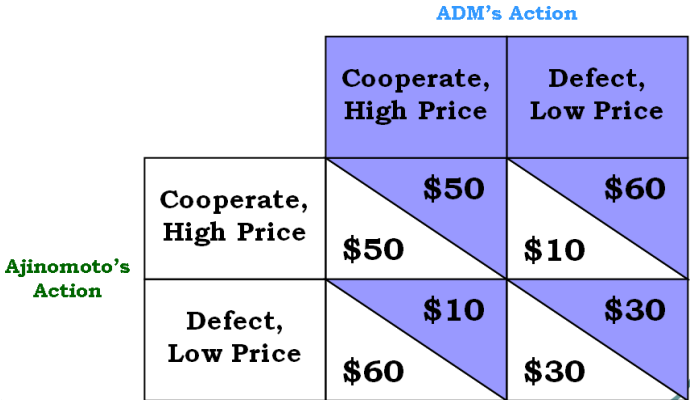
(16) Three grocery stores service a town. The owners regularly communicate information about prices, to consumers and each other, indirectly through newspaper advertisements.
***True/False*: This facilitates tacit collusion.**

(a) TRUE (b) FALSE

(17) Three grocery stores service a town, and all grocery stores have roughly identical costs of production.
***True/False*: This facilitates tacit collusion.**

(a) TRUE (b) FALSE

The graph below depicts a one-shot price setting game. I repeat, assume that this game is played only once.



(18) In the one-shot price setting game, the dominant strategy for ADM and Ajinomoto is to do what?

(a) ADM: high price
Ajinomoto: high price

(b) ADM: high price
Ajinomoto: low price

(c) ADM: low price
Ajinomoto: high price

(d) ADM: low price
Ajinomoto: low price

(19) In the one-shot price setting game, what is the Nash Equilibrium?

(a) ADM: high price
Ajinomoto: high price

(b) ADM: high price
Ajinomoto: low price

(c) ADM: low price
Ajinomoto: high price

(d) ADM: low price
Ajinomoto: low price

(20) In the one-shot price setting game, if the two firms could legally collude and create enforceable legal contracts dictating each firm's price, what price would each business charge.

(a) ADM: high price
Ajinomoto: high price

(b) ADM: high price
Ajinomoto: low price

(c) ADM: low price
Ajinomoto: high price

(d) ADM: low price
Ajinomoto: low price

(21) A dominant strategy is defined as a strategy that

(a) is a superior strategy regardless of the opponent's strategy

(b) is a superior strategy given the opponent's strategy

(c) is a superior strategy when enforceable, legal contracts are allowed

(d) is a superior strategy when tacit collusion occurs

(22) In strategic games, a _____ Equilibrium does not always exist, but a _____ Equilibrium usually does exist.

(a) Blank 1: Hayek
Blank 2: Friedman

(b) Blank 1: Dominant Strategy
Blank 2: Nash

(c) Blank 1: Marshall
Blank 2: Dominant

(d) Blank 1: Prequel
Blank 2: Sequel

Both Ram and Rod are brewers, the only two brewers of traditional American beer in the region. The alcohol content is one attribute, among many, that influences the desirability of beer. American beer tastes best when at a 5% alcohol content. However, one could brew a 3.2% beer, a lower quality beer, which tastes like watered-down beer. Lower quality beer is cheaper to produce. In fact, their aggregate profits are highest if both produce a low quality beer. When both firms produce low-quality beer, students will still purchase roughly the same amount, and will pay roughly the same price, but it costs them less to brew. But if Ram produces 3.2% beer, Rod can easily brew a higher quality beer, charge slightly more, and steal most of Ram's customers, and vice-versa. Assume this "game" is only played once.

Beer Quality Game (profits in billions of dollars)

		Rod: High Quality Beer (5%)	Rod: Low Quality Beer (3.2%)
Ram	High Quality Beer (5%)	$10 / $10	$5 / $20
	Low Quality Beer (3.2%)	$20 / $5	$15 / $15

(23) What is the dominant strategy equilibrium in the *Beer Quality Game?*

(a) Ram: high quality
Rodd: high quality

(b) Ram: high quality
Rodd: low quality

(c) Ram: low quality
Rodd: high quality

(d) Ram: low quality
Rodd: low quality

(e) there are no dominant strategies, so there is no dominant strategy equilibrium

(24) Suppose the Oklahoma legislature is considering a bill that would outlaw the sale of all beer with an alcohol content higher than 3.2%. How would Ram and Rod react to this proposed bill?

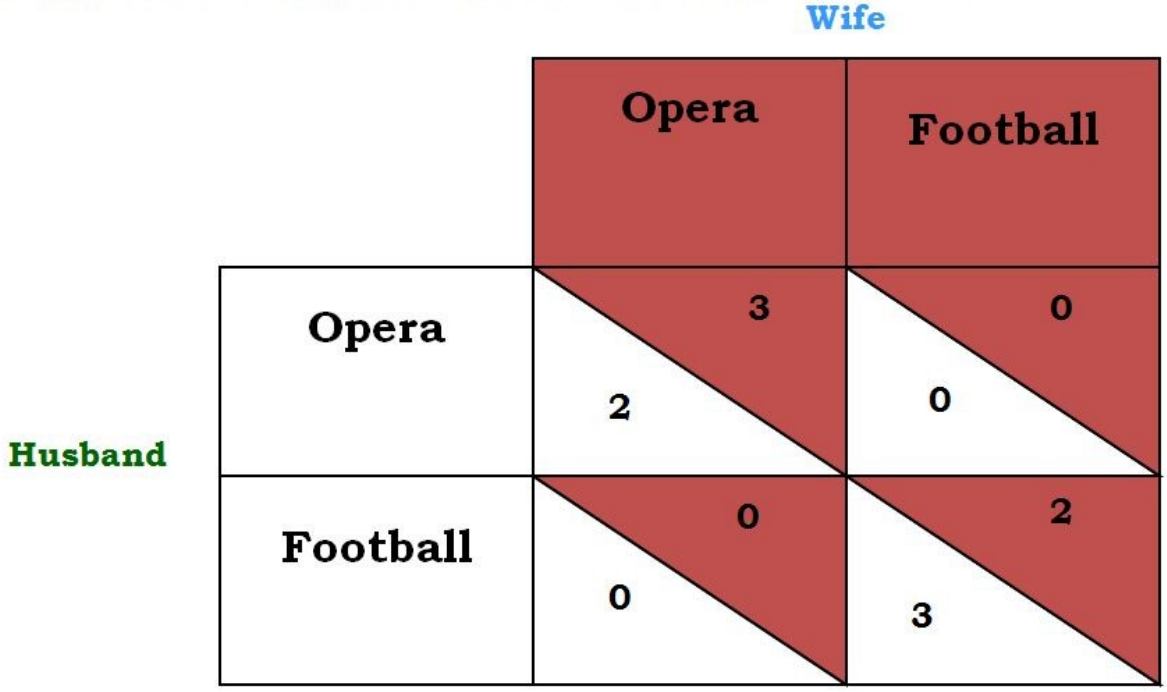
(a) they would both support the bill

(b) they would both oppose the bill

(c) whether they would oppose or support the bill depends on the particular strategies Ram and Rod choose.

Battle of the Sexes

Imagine a couple that agreed to meet this evening, but cannot recall if they will be attending the opera or a football match. The husband would most of all like to go to the football game. The wife would like to go to the opera. Both would prefer to go to the same place rather than different ones, because they enjoy the company of each other more than they enjoy the football match/opera. If they cannot communicate, where should they go? The outcome of the game is a simple number denoting happiness. For example, if the wife goes to the opera and the husband goes to football, they each receive an outcome of zero, meaning they are not happy. However, if they both go to the opera they are happy, but the wife's happiness of 3 is greater than the husband's happiness of 2.



(25) What is the Dominant Strategy Equilibrium in the *Battle of the Sexes Game?*

(a) Wife: Opera
Husband: Opera

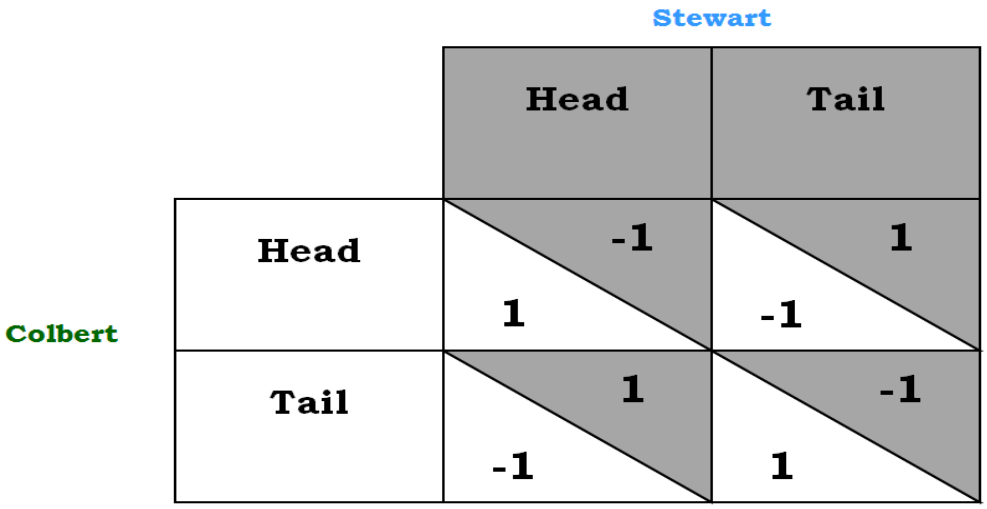
(b) Wife: Football
Husband: Football

(c) Wife: Football
Husband: Opera

(d) Wife: Opera
Husband: Football

(e) there are no dominant strategies, thus no Dominant Strategy Equilibrium

Below is a game called *Matching Pennies*, where each person decides whether they are going to reveal a coin with heads up or tails up. They must both choose heads or tails in secret, and then reveal their choices simultaneously. If the coins match, Stewart pays Colbert $1, and if they are different Colbert pays Stewart $1.



(26) What is the Dominant Strategy Equilibrium in the *Matching Pennies* game?

(a)Colbert: head
Stewart: head

(b)Colbert: tail
Stewart: head

(c)Colbert: head
Stewart: tail

(d)Colbert: tail
Stewart: tail

(e) there are no dominant strategies, thus no Dominant Strategy Equilibrium

(27) What is the Nash Equilibrium in the *Matching Pennies* game?

(a)Colbert: head
Stewart: head

(b)Colbert: tail
Stewart: head

(c)Colbert: head
Stewart: tail

(d)Colbert: tail
Stewart: tail

(e) there is no Nash Equilibrium

The following is a series of statements regarding an industry, with particular attention towards the ability of the industry to engage in tacit collusion. Your job is to determine whether each statement is true or false.

(28) **True/False:** About three grocery stores service a town, and the owners and managers of those three grocery stores change frequently. **True/False:** This facilitates tacit collusion.

(a) TRUE

(b) FALSE

(29) **True/False:** About three grocery stores service a town, and the owners and managers of those three grocery stores have extensive experience in tacit collusion. **True/False:** This facilitates tacit collusion.

(a) TRUE (b) FALSE

(30) **True/False:** About three grocery stores service a town. The owners regularly communicate information about prices, to consumers and each other, indirectly through newspaper advertisements. **True/False:** This facilitates tacit collusion.

(a) TRUE (b) FALSE

(31) **True/False:** About three grocery stores service a town. Two grocery stores are similar in their costs, but one grocery store has substantially lower costs. **True/False:** This facilitates tacit collusion.

(a) TRUE (b) FALSE

(32) This describes a practice where a business initially charges high prices, but then lowers the price substantially if its competitors charge a low price.

(a) trigger pricing (c) tacit collusion (e) Folk

(b) low-price guarantee (d) tit-for-tat

(33) This describes a practice where a business initially charges high prices, and then publicly states (perhaps through newspaper advertisements) that it will match any competitor's price.

(a) trigger pricing (c) tacit collusion (e) Folk

(b) low-price guarantee (d) tit-for-tat

(34) This is an unspoken but understood agreement between firms to charge high prices and not try to undercut each other on price.

(a) trigger pricing (c) tacit collusion (e) Folk

(b) low-price guarantee (d) tit-for-tat

(35) This is a theorem showing that, if the price-setting game is placed an infinite number of times and players are rational, they will develop cooperate strategies whereby they both charge high prices.

(a) trigger pricing (c) tacit collusion (e) Folk

(b) low-price guarantee (d) tit-for-tat

(36) In 1980, Robert Axelrod (a political scientist) held a contest regarding differing strategies in the repeating-price-setting game. The _____ strategy won the contest, and was deemed to be the most profitable strategy.

(a) trigger pricing (c) tacit collusion (e) Folk

(b) low-price guarantees (d) tit-for-tat

(1) This describes a market with a few sellers and many buyers of identical products with no close substitutes.

(a) monopsony (c) oligopoly (e) perfect competition

(b) monopoly (d) oligopsony

(2) This describes a market with a single buyer and many sellers of identical products with no close substitutes.

(a) monopsony (c) oligopoly (e) perfect competition

(b) monopoly (d) oligopsony

(3) This describes a market with many buyers and many sellers of identical products with no close substitutes.

(a) monopsony (c) oligopoly (e) perfect competition

(b) monopoly (d) oligopsony

(4) A _____ is a market structure that will most likely result in a price higher than the perfectly competitive price (everything else being equal).

(a) monopsony (c) oligopsony (e) a,c

(b) monopoly (d) a,b

(5) A _____ is a market structure that will most likely result in a price lower than the perfectly competitive price (everything else being equal).

(a) monopsony (c) oligopsony (e) a,c

(b) monopoly (d) a,b

(6) Consider the live-cattle market. Assume that, historically, the live-cattle market could be described as perfectly competitive. However, many of the buyers of live-cattle are wishing to merge with one another. They believe that by merging and becoming a bigger firm, they can share certain fixed costs and reduce their average cost of production. After this merge, because it is cheaper for them to process live-cattle into beef, they would place a higher value on live cattle. **If the mergers are approved and take place, what will happen to the price of live-cattle?**

(a) the price would rise due to the greater market power of the buyers

(b) the price would fall due to the greater market power of the buyers

(c) the price would rise because these new firms place a higher value on live-cattle

(d) the price change is ambiguous: greater market power by buyers tends to depress prices, while the higher value of live-cattle tends to raise prices

(e) a,c

(7) We have learned in class that genetically modified seeds sold by Monsanto are patented by Monsanto, making Monsant o the single seller of genetically modified seed, which we believe has no close substitute. Most likely, what would have happened in the last thirty years if these patents did not exist?

(a) farmers would pay a much lower price for genetically modified seed

(b) the genetically modified seed probably would not have been invented

(c) farmers would pay a higher price for genetically modified seed

(d) mergers between seed companies would form, allowing market power to perform the role normally played by patents

(8) Producers of live-cattle (cattle ready for harvest) often claim that beef processors obtain market power by placing a proportion of cattle under contract months before harvest, where the price of those cattle is set equal to the subsequent price of the live-cattle not under contract. This practice is conventionally referred to as _____ in the beef industry, and in the courtroom.

(a) contract cows (c) reserved culls (e) maintained culls

(b) captive supplies (d) retained culls

(9) This describes a market with many sellers and many buyers of identical products with no close substitutes.

(a) monopsony (c) oligopoly (e) perfect competition

(b) monopoly (d) oligopsony

(10) This describes a market with a single buyer and many sellers of identical products with no close substitutes.

(a) monopsony (c) oligopoly (e) perfect competition

(b) monopoly (d) oligopsony

(11) This describes a market with a few sellers and many buyers of identical products with no close substitutes.

(a) monopsony (c) oligopoly (e) perfect competition

(b) monopoly (d) oligopsony

(12) A _____ is a market structure that will most likely result in a price lower than the perfectly competitive price (everything else being equal).

(a) monopsony (c) oligopoly (e) a,c

(b) monopoly (d) a,b

(1) Price are determined by (1) opportunity costs, (2) consumer value, (3) _____, and (4) psychological and social considerations.

(a) timing of exchange

(b) place of exchange

(c) form of payment

(d) negotiating power of buyers versus sellers

(2) Price will tend to be between a maximum price, determined by the value the consumer places on the good, and a minimum price, determined by _____

(a) opportunity costs

(b) possession interpole

(c) price floor

(d) price casting

(13) We have learned in class that genetically modified seeds sold by Monsanto are patented by Monsanto, making Monsanto the single seller of genetically modified seed, which we believe has no close substitute. Most likely, what would have happened in the last thirty years if these patents did not exist?

(a) farmers would pay a higher price for genetically modified seed

(b) mergers between seed companies would form, allowing market power to perform the role normally played by patents

(c) farmers would pay a much lower price for genetically modified seed

(d) the genetically modified seed probably would not have been invented

(14) Two firms who have normally been fierce competitors with one another have decided to merge into one company. This merger would create a market with only one seller and many buyers of identical products with no close substitutes (before, it was two sellers and many buyers). The merging of the two companies will endow them with greater market power. The merge will also allow them to lower their costs, as they begin to share fixed costs. For example, before there were two secretaries, one in each firm, serving each CEO. Now there will be only one CEO, and those two secretary jobs can be merged into one. That is just one example of how mergers can lower costs. After the merger, what would happen to the price charged for the product they sell.

(a) because the costs of producing the good falls, the price of the good will also fall after the merger

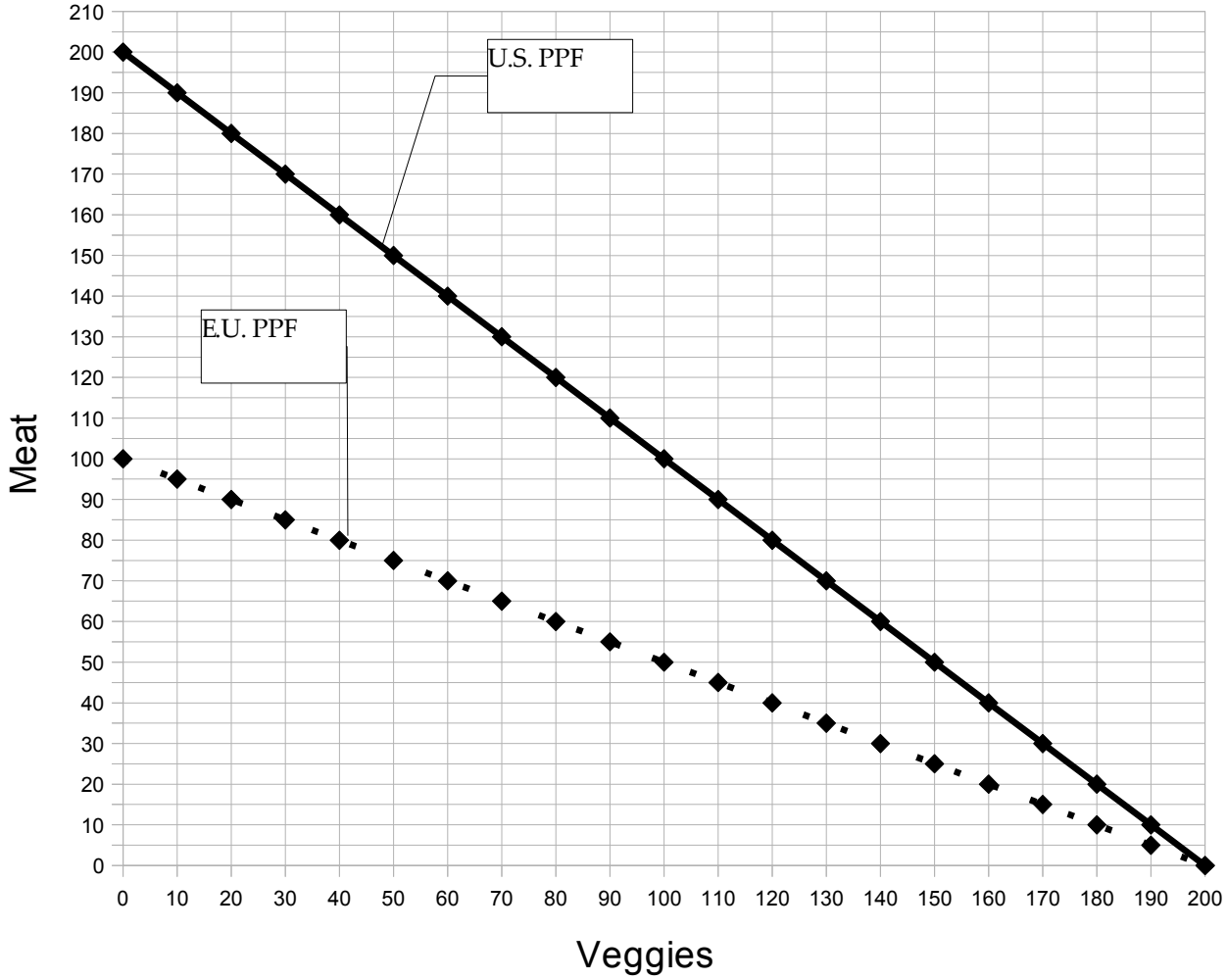
(b) because the merger would provide the companies with more market power, they will utilize this market power to raise prices

(c) because the merger would provide the companies with more market power, they will utilize this market power to negotiate lower prices for their product

(d) the price change is ambiguous. The greater market power tends to push price up, while the lower costs after the merger tends to push prices down. Without further information, it is impossible to tell which force is stronger

(e) the price will fall. The lower costs after the merger act to decrease prices, and the firms' greater market power will allow them to negotiate lower prices for the product. Both forces act to decrease prices, so we know price will fall.

Use the graph below to answer the next question.



(1) Which of the following formulas are the correct PPF's for the U.S. and the EU.

(a) US: Meat = 200 - 1(Veggies)
EU: Meat = 100 - (1/2)(Veggies)

(b) US: Meat = 200 - 1(Veggies)
EU: Meat = 100 - 2(Veggies)

(c) US: Meat = 100 - 1(Veggies)
EU: Meat = 100 - (1/2)(Veggies)

(d) US: Meat = 100 - 1(Veggies)
EU: Meat = 200 - (1/2)(Veggies)

(2) Using the PPF curves below, what is the opportunity cost of Salmon production for the Wu Tang Clan?
Wu Tang Clan: Grain = 10 - (3/4)(Salmon)
No Tang Clan: Grain = 10 - (1/2)(Salmon)

(a) 4/3 of one grain

(b) 3/4 of one grain

(c) 3/2 of one grain

(d) 2/3 of one grain

(3) Using the PPF curves below, what is the opportunity cost of grain production for the No Tang Clan?
Wu Tang Clan: Grain = 10 - (3/4)(Salmon)
No Tang Clan: Grain = 10 - (1/2)(Salmon)

(a) (½) Salmon
(b) 2 Salmon
(c) 4/3 Salmon
(d) 5 Salmon

Use the following information to answer the next question. Suppose that, initially, the US and EU do not engage in trade. In autarky, the U.S. produces and consumes 1,000 Meat and 2,000 Veggies, while the EU produces and consumes 1,500 Meat and 2,000 Veggies. Once they engage in trade, the US produces 4,500 Veggies and no Meat, while the EU produces no Veggies and 3,000 Meat.

(4) *True or False*: If the U.S. and EU traded 2,000 Veggies for 1,000 Meat, both countries can be made unambiguously better off.

(a) TRUE (b) FALSE

(5) If Country A has a(n) _____ advantage in the production of one good, and Country B has a(n) _____ advantage in the production of another good, both can and will be made better off by trading with each other (the same term is used in both blanks)

(a) absolute
(b) comparative
(c) strategic
(d) opportunate

(6) *True*/*False*: The trade balance between the U.S. and China is important because it measures the performance of U.S. firms relative to China.

(a) true (b) false

(7) *True*/*False*: The U.S. can obtain greater wealth by attempting to export more goods to the rest of the world than it imports.

(a) true (b) false

(8) *True*/*False*: The "true" U.S. trade balance ("true", meaning we count the purchase of investments by foreigners as an export) will always, on average, be zero, unless foreign aid is administered.

(a) true (b) false

(9) ***True/False*****: The government regularly measures and reports imports into the U.S. as exceeding exports from the U.S. to other countries. This, however, is because the government does not count foreign purchases of U.S. investments as an export.**

(a) true (b) false

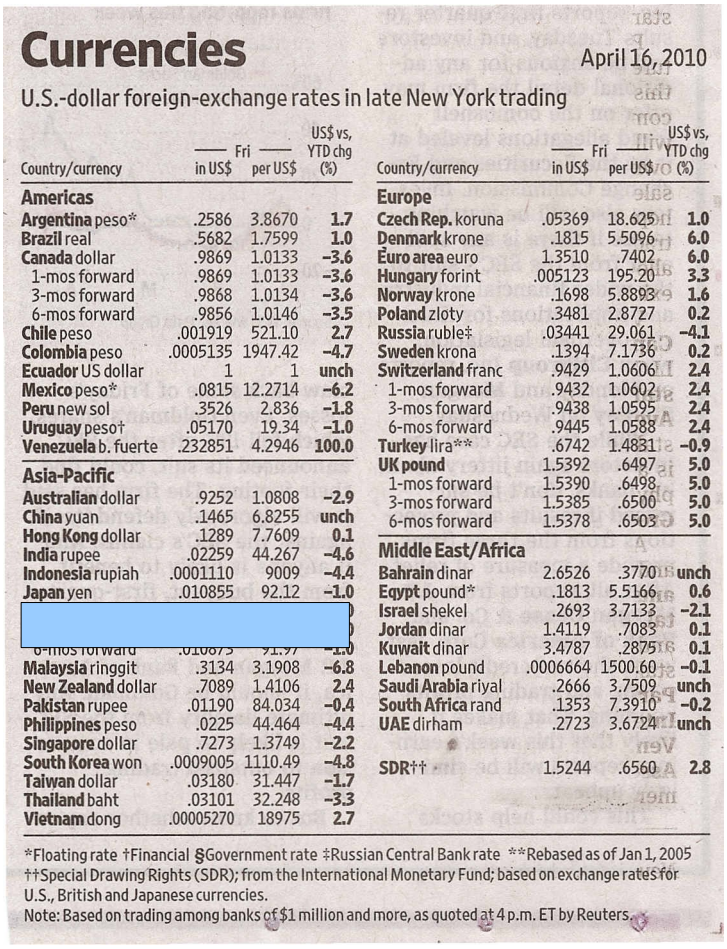
(10) ***True/False*****: If the U.S. could continually import more goods from the rest of the world than it exports, this would be good for Americans.**

(a) true (b) false

(11) ***True/False*****: Every time you spend money on an imported good, that dollar you spend will come back to U.S. businesses in the form of a U.S. export.**

(a) true (b) false

The figure below contains the currency exchange rate prices that were reported in the *Wall Street Journal* for April 16, 2010 trading. Use this figure to answer questions the next two questions.



Currencies

April 16, 2010

U.S.-dollar foreign-exchange rates in late New York trading

Country/currency	Fri in US$	Fri per US$	US$ vs, YTD chg (%)
Americas			
Argentina peso*	.2586	3.8670	1.7
Brazil real	.5682	1.7599	1.0
Canada dollar	.9869	1.0133	-3.6
1-mos forward	.9869	1.0133	-3.6
3-mos forward	.9868	1.0134	-3.6
6-mos forward	.9856	1.0146	-3.5
Chile peso	.001919	521.10	2.7
Colombia peso	.0005135	1947.42	-4.7
Ecuador US dollar	1	1	unch
Mexico peso*	.0815	12.2714	-6.2
Peru new sol	.3526	2.836	-1.8
Uruguay peso†	.05170	19.34	-1.0
Venezuela b. fuerte	.232851	4.2946	100.0
Asia-Pacific			
Australian dollar	.9252	1.0808	-2.9
China yuan	.1465	6.8255	unch
Hong Kong dollar	.1289	7.7609	0.1
India rupee	.02259	44.267	-4.6
Indonesia rupiah	.0001110	9009	-4.4
Japan yen	.010855	92.12	-1.0
6-mos forward	.010875	91.97	-1.0
Malaysia ringgit	.3134	3.1908	-6.8
New Zealand dollar	.7089	1.4106	2.4
Pakistan rupee	.01190	84.034	-0.4
Philippines peso	.0225	44.464	-4.4
Singapore dollar	.7273	1.3749	-2.2
South Korea won	.0009005	1110.49	-4.8
Taiwan dollar	.03180	31.447	-1.7
Thailand baht	.03101	32.248	-3.3
Vietnam dong	.00005270	18975	2.7

Country/currency	Fri in US$	Fri per US$	US$ vs, YTD chg (%)
Europe			
Czech Rep. koruna	.05369	18.625	1.0
Denmark krone	.1815	5.5096	6.0
Euro area euro	1.3510	.7402	6.0
Hungary forint	.005123	195.20	3.3
Norway krone	.1698	5.8893	1.6
Poland zloty	.3481	2.8727	0.2
Russia ruble‡	.03441	29.061	-4.1
Sweden krona	.1394	7.1736	0.2
Switzerland franc	.9429	1.0606	2.4
1-mos forward	.9432	1.0602	2.4
3-mos forward	.9438	1.0595	2.4
6-mos forward	.9445	1.0588	2.4
Turkey lira**	.6742	1.4831	-0.9
UK pound	1.5392	.6497	5.0
1-mos forward	1.5390	.6498	5.0
3-mos forward	1.5385	.6500	5.0
6-mos forward	1.5378	.6503	5.0
Middle East/Africa			
Bahrain dinar	2.6526	.3770	unch
Egypt pound*	.1813	5.5166	0.6
Israel shekel	.2693	3.7133	-2.1
Jordan dinar	1.4119	.7083	0.1
Kuwait dinar	3.4787	.2875	0.1
Lebanon pound	.0006664	1500.60	-0.1
Saudi Arabia riyal	.2666	3.7509	unch
South Africa rand	.1353	7.3910	-0.2
UAE dirham	.2723	3.6724	unch
SDR††	1.5244	.6560	2.8

*Floating rate †Financial §Government rate ‡Russian Central Bank rate **Rebased as of Jan 1, 2005
††Special Drawing Rights (SDR); from the International Monetary Fund; based on exchange rates for U.S., British and Japanese currencies.
Note: Based on trading among banks of $1 million and more, as quoted at 4 p.m. ET by Reuters.

(12) If you take $100,000 (where $ always means U.S. dollars) and exchange them for Brazil reals, at the exchange rates to the right, how many reals will you receive?

(a) 63,000 reals
(b) 56,820 reals
(c) 175,990 reals
(d) 1,010,399 reals

(13) If you take 100,000 Brazilion reals and exchange them for U.S. dollars, how many U.S. dollars will you have (may be small rounding errors)?

(a) 63,000 reals
(b) 56,820 reals
(c) 175,990 reals
(d) 1,010,399 reals

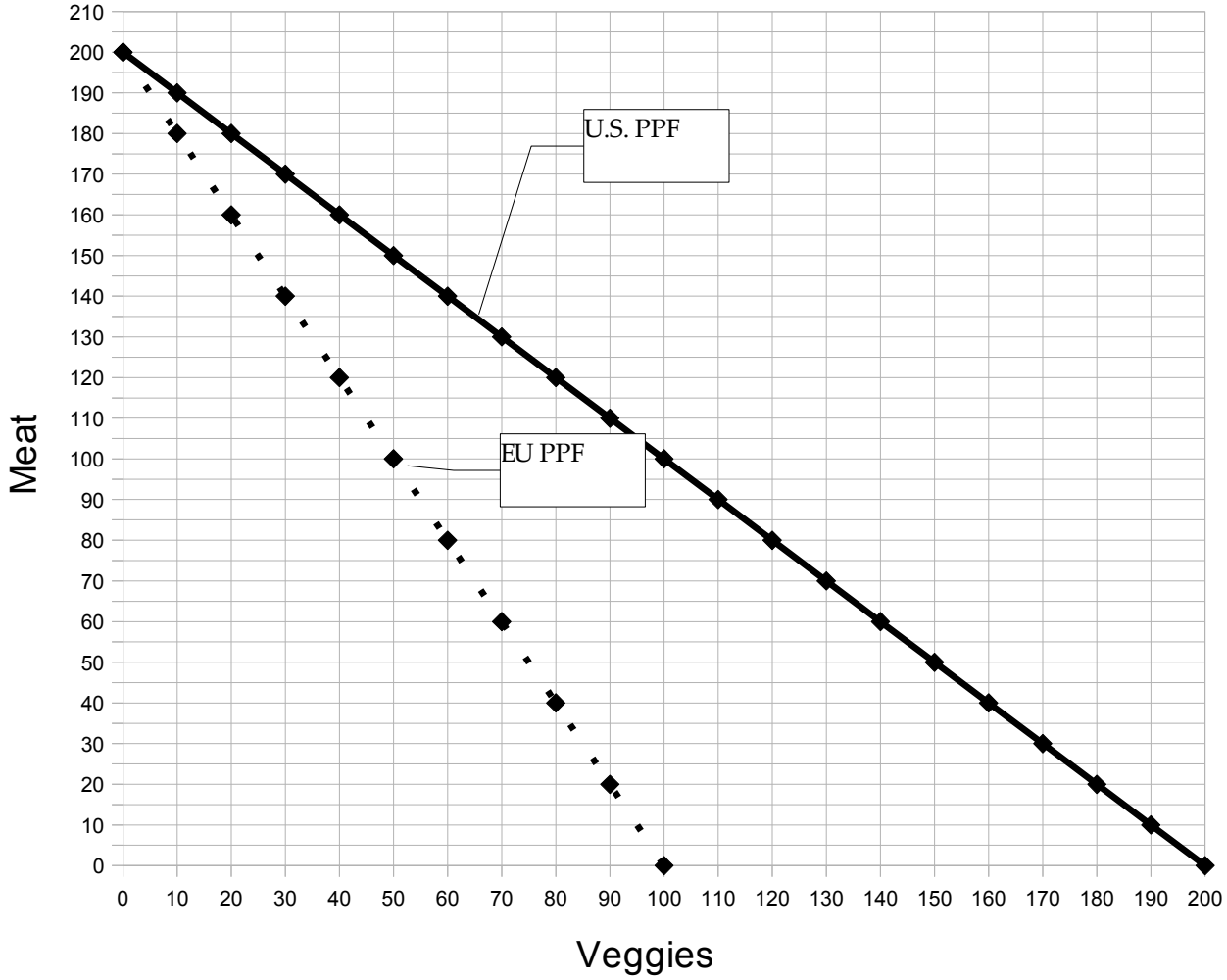
(14) Suppose that the exchange rate between the U.S. dollar and the Australian dollar changes, such that the dollar appreciates in value. This means that each U.S. dollar purchases more Australian dollars than before. How will this affect foreign demand for U.S. exports?

(a) foreign demand for U.S. exports will rise
(b) foreign demand for U.S. exports will fall
(c) foreign demand for U.S. exports will not change

(15) Suppose that political instability in Mexico makes U.S. investors more wary about investing their U.S. dollars in Mexico. How will this impact the exchange rate between U.S. dollars and Mexican pesos?

(a) each U.S. dollar will purchase more Mexican pesos
(b) each U.S. dollar will purchase less Mexican pesos
(c) the exchange rate will not change.

Use the Production Possibilities Frontiers for the U.S. and the European Union below to answer the following question.



(16) Which of the following formulas are the correct PPF's for the U.S. and the EU.

(a) US: Meat = 200 - 1(Veggies)
EU: Meat = 200 - (1/2)(Veggies)

(b) US: Meat = 200 - 1(Veggies)
EU: Meat = 200 - 2(Veggies)

(c) US: Meat = 200 - 2(Veggies)
EU: Meat = 200 - 1(Veggies)

(d) US: Meat = 200 - (1/2)(Veggies)
EU: Meat = 100 - 2(Veggies)

(17) Using the PPF curves below, what is the opportunity cost of meat production for the U.S.?
US: Meat = 100 – (1/2)(Veggies)
China: Meat = 500 – 2(Veggies)

(a) 2 Veggies

(c) 100 Veggies

(b) ½ Veggies (d) 100 - ½ = 99 Meat

Use the following information to answer the next two questions. Suppose that, initially, the US and EU do not engage in trade. In autarky, the U.S. produces and consumes 300 Meat and 200 Veggies, while the EU produces and consumes 150 Meat and 200 Veggies. Once they engage in trade, the US produces 500 Meat and no Veggies, while the EU products no Meat and 500 Veggies.

(18) **True or False:** If the U.S. and EU traded 200 Meat for 250 Veggies, both countries can be made unambiguously better off.

(a) TRUE (b) FALSE

(19) **True or False:** If the U.S. and EU traded 100 Meat for 200 Veggies, both countries can be made unambiguously better off.

(a) TRUE (b) FALSE

(20) If Country A can produce Meat at a lower opportunity cost than Country B, then Country A is said to have a _____ advantage in the production of meat.

(a) strategic (c) absolute

(b) opportunate (d) comparative

(21) If Country A can more units of Meat than Country B, then Country A is said to have a _____ advantage in the production of meat.

(a) strategic (c) absolute

(b) opportunate (d) comparative

(22) If the U.S. runs a negative trade balance (also known as a trade deficit) with the world (as the U.S. currently does), this implies that (assume that "exports" and "imports" do not count purchases of investments)...

(a) the U.S. exports more than it imports

(b) the U.S. imports more than it exports

(c) the U.S. borrows more money from the world than it lends to the world

(d) b,c

(e) a,c

(23) The U.S. currently runs a negative trade balance, also known as a trade deficit. Why?

(a) because foreigners love to invest in the U.S. by purchasing our stocks and bonds

(b) because the exchange rate between the dollar and other currencies does not equalize imports and exports

(c) because of the foreign aid the U.S. sends other countries

(d) b,c

(e) a,c

(24) **True/False:** A country that exports more than it imports accumulates more wealth, relative to other countries. Thus, a country should always encourage exports and discourage imports.

(a) TRUE (b) FALSE

(25) **True/False:** Every time you spend money on an imported good, that dollar you spend will come back to U.S. businesses in the form of a U.S. export.

(a) TRUE (b) FALSE

(26) **True/False:** Suppose all U.S. citizens decide to purchase only American-made products. Though U.S. consumers are hurt in that they can no longer enjoy imported products, U.S. firms will benefit by additional sales.

(a) TRUE (b) FALSE

(27) **True/False:** The U.S. should try to maintain a positive trade balance with the rest of the world, to prevent losing U.S. jobs to foreign countries.

(a) TRUE (b) FALSE

(28) Suppose that the exchange rate between the U.S. dollar and the Argentina peso is 4 pesos per U.S. dollar. If the price of soybeans in Argentina is 30 pesos per bushel, what would it cost an American, in U.S. dollars, to purchase Argentine soybeans? Ignore transportation costs.

(a) \$9.9 (c) \$5.1 (e) \$120

(b) \$150 (d) \$7.5

(29) About 80% of all Oklahoma wheat is exported, much of it to Mexico. Suppose that the U.S. dollar becomes stronger, meaning one dollar now purchases more Mexican pesos. What will happen to the volume of exports of OK wheat to Mexico? You may assume the price of wheat in OK remains unchanged.

(a) exports will rise because OK wheat is now cheaper to Mexicans (they give up less pesos to buy OK wheat)

(b) exports will fall because OK wheat is now more expensive to Mexicans (they give up more pesos to buy OK wheat)

(c) the volume of exports will not change

(1) **True/False:** Adam Smith, the 18th Century moral philosopher, gave birth to economics with his book *Wealth of Nations.*

(a) TRUE (b) FALSE

(2) **True/False:** Adam Smith was the first philosopher to contend that self-interest, largely through the profit motive, and the invisible hand of the market leads to desirable social outcomes.

(a) TRUE (b) FALSE

(3) **True/False:** Alfred Marshall developed a theory of how government spending can cure economic recessions, and for this reason is adored by modern liberals.

(a) TRUE (b) FALSE

(4) **True/False:** John Maynard Keynes is loved by conservatives because his book, *The Road to Serfdom*, suggests modern-day liberalism can lead to fascism, and stressed the importance of personal freedom and personal responsibility.

(a) TRUE (b) FALSE

(5) **True/False:** Milton Friedman developed monetary economics, and achieved notoriety for his book *Capitalism and Freedom*.

(a) TRUE (b) FALSE

(6) ***True*/*False*:** Adam Smith, the 18th Century moral philosopher, gave birth to economics with his book *Wealth of Nations.*

(a) TRUE (b) FALSE

(7) ***True*/*False*:** Friederich Hayek created economic models to explain the Great Depression and how to escape the depression through the use of government spending. Many of these models assumed that prices were "sticky". For this reason, he is loved by liberals, as he provided them with an economic foundation for large governmental expenditures.

(a) TRUE (b) FALSE

(8) ***True*/*False*:** Ayn Rand was a philosopher and novelist, who illustrating economic concepts in her wildly popular book *Atlas Shrugged.*

(a) TRUE (b) FALSE

(1) The 2007-present financial crisis involved (a) bad bets (b) _____ (c) domino effects, and (d) 21st Century bank runs.

(a) lack of government stimulus

(b) overvalued house prices

(c) truant clauses

(d) excessive leverage

(2) What is a 21st Century bank run?

(a) where depositors withdraw their deposits electronically, instead of waiting in long lines outside the bank

(b) where excessive leverage is used to destroy a rival bank, inducing depositors to withdraw their funds

(c) loss of confidence and withdrawal of funds at an investment bank

(d) a bank run that induces the FDIC insurance to take over a bank

(3) The 2007-present financial crisis involved (a) bad bets (b) excessive leverage (c) domino effects, and (d) _____.

(a) borrowing too much money

(b) 21st Century bank runs

(c) not enough assets to cover the losses resulting from bad bets

(d) impacts bad banks had on good banks when they were forced to sell assets at low, low prices

(4) A major distinction between a fiscal stimulus, say, by government increasing its expenditures, and the *Federal Reserve* printing money to encourage economic activity, is ...

(a) a stimulus helps ordinary Americans while the *Federal Reserve* only helps foreigners who purchase U.S. exports

(b) the *Federal Reserve* answers only to the House of Representatives, while the fiscal stimulus must be approved by the House of Representatives AND the Senate

(c) Congress is forced to raise taxes in the same period the stimulus is implemented to pay for the stimulus, while the *Federal Reserve* does not

(d) each dollar spent in the stimulus had to be taken out of the economy first, unlike newly printed money by the *Federal Reserve*.

(1) How do the earnings of prostitutes change if they use a pimp, and why?

(a) earnings rise, as the pimp helps market the prostitute by finding more wealthy clientele

(b) earnings rise, as the pimp allows only a certain number of prostitutes in a given area, giving the prostitutes more market power

(c) earnings fall as the pimp takes a portion of prostitutes' earnings in return for protection

(d) earnings fall as the pimp takes a portion of prostitutes' earning in return for permission to solicit in the pimps' region

(2) How does Dr. Norwood mitigate social desirability bias in his consumer food preference research?

(a) using a *priming statement* whereby consumers are encouraged to be truthful and not exhibit social desirability bias

(b) using a psychological scale to measure consumers' tendency to exhibit social desirability bias (remember, the Marlowe-Crowne scale)

(c) asking consumers what products they think others would buy, instead of what they themselves would buy

(d) administering surveys while preserving anonymity, so that Dr. Norwood cannot link survey responses with the subjects' identities

Global Warming

(1) **True/False:** Venus is hotter than Mercury, even though Mercury is closer to the sun, because Venus has an atmosphere of greenhouse gases while Mercury has almost no atmosphere.

(a) TRUE (b) FALSE

(2) **True/False:** When economists perform cost-benefit analyses of U.S. policies to fight global warming, they tend to measure high costs, but high benefits as well.

(a) TRUE (b) FALSE

(3) **True/False:** In considering the reduction of greenhouse gas emissions, we should bear in mind the opportunity cost. Which of the following represents an opportunity costs of reducing greenhouse gas emissions?

(a) money spent reducing emissions could be spent on alternative programs to benefit society, such as fighting malaria in developing countries

(b) future generations will be poorer than ours, and failing to mitigate global warming will make them even poorer

(c) instead of spending money now to reduce temperatures for future generations, we could invest that money instead and give future generations that money to compensate them for the temperature increase.

(d) b,c

(e) a,c

The following sheets contain PowerPoint slides used in class lectures.

Game Theory

Game theory is used by governments and firms.

"As for firms that want to get their hands on a sliver of the airwaves, their best bet is to go out first and hire themselves a good game theorist." (The Economist, July 23, 1994).

"At Bell Atlantic, we've found that the lessons of game theory give us a wider view of our business situation and provide us a a more nimble approach to corporate planning." Fortune, Sept 1996.

The One-Shot Price Setting Game (simplified)

		Player 2: Cooperate, High Price	Player 2: Defect, Low Price
Player 1	Cooperate, High Price	$10 / $10	$15 / $1
Player 1	Defect, Low Price	$1 / $15	$4 / $4

The One-Shot Price Setting Game (simplified)

Price Wars, Cooperation, and Collusion in the market for lysine.

Lysine is an essential amino acid, meaning animals cannot synthesize it. Lysine must be ingested whole. Hence, it is a valuable livestock feed supplement, and it is difficult to manufacture.

Ajinomoto's Action

ADM's Action

	Cooperate, High Price	**Defect, Low Price**
Cooperate, High Price	**$50** / **$50**	**$60** / **$10**
Defect, Low Price	**$10** / **$60**	**$30** / **$30**

The One-Shot Price Setting Game (simplified)

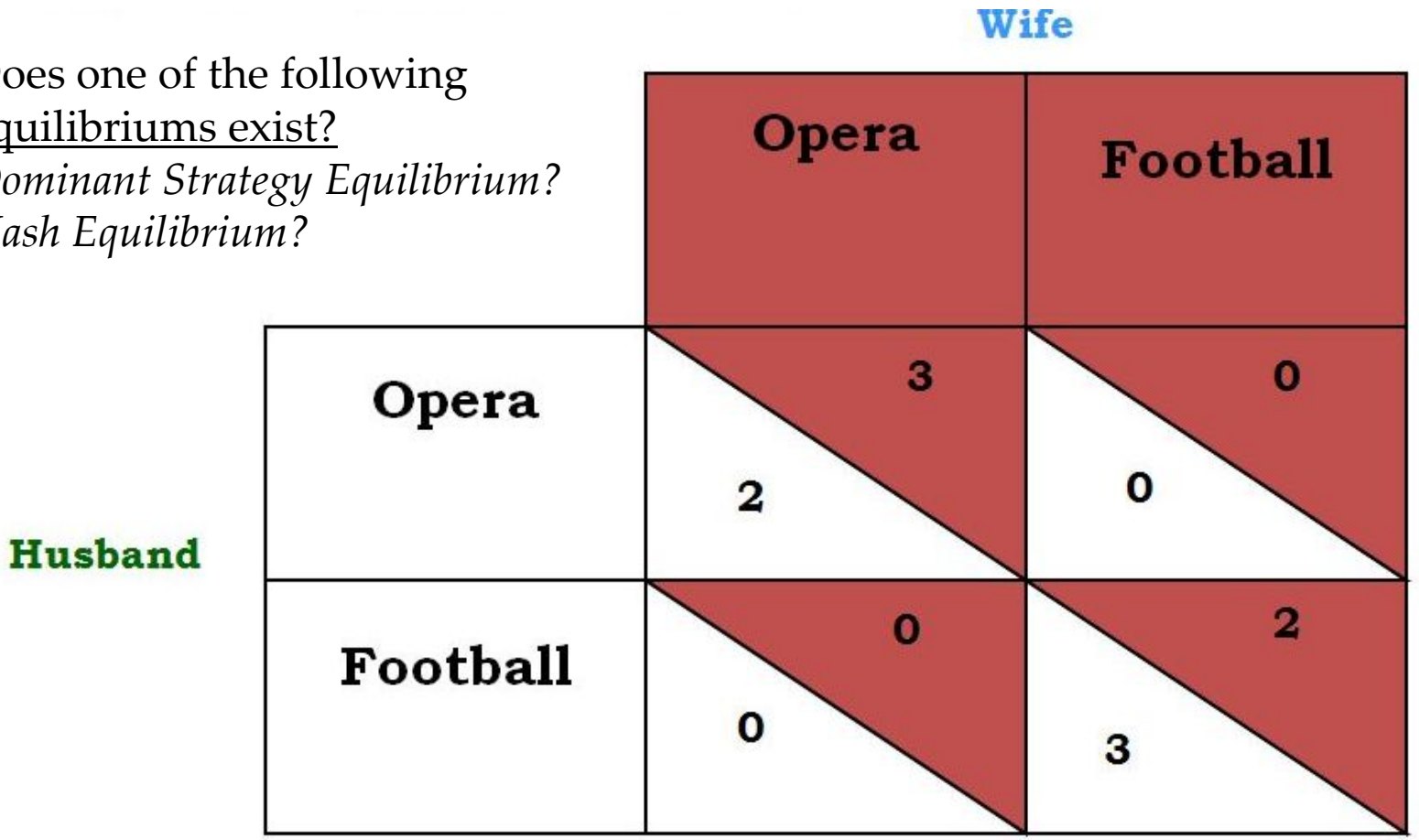
In the one-shot price setting game, the Nash Equilibrium yields inferior profits.

They would be better off colluding… entering an enforceable agreement that both will cooperate and set high prices.

Ajinomoto and ADM did this by price-fixing. But that is illegal and ADM was fined $100 million, and incurred up to $500 million of expenses due to the illegal collusion.

Battle of the Sexes

Does one of the following equilibriums exist?
Dominant Strategy Equilibrium?
Nash Equilibrium?



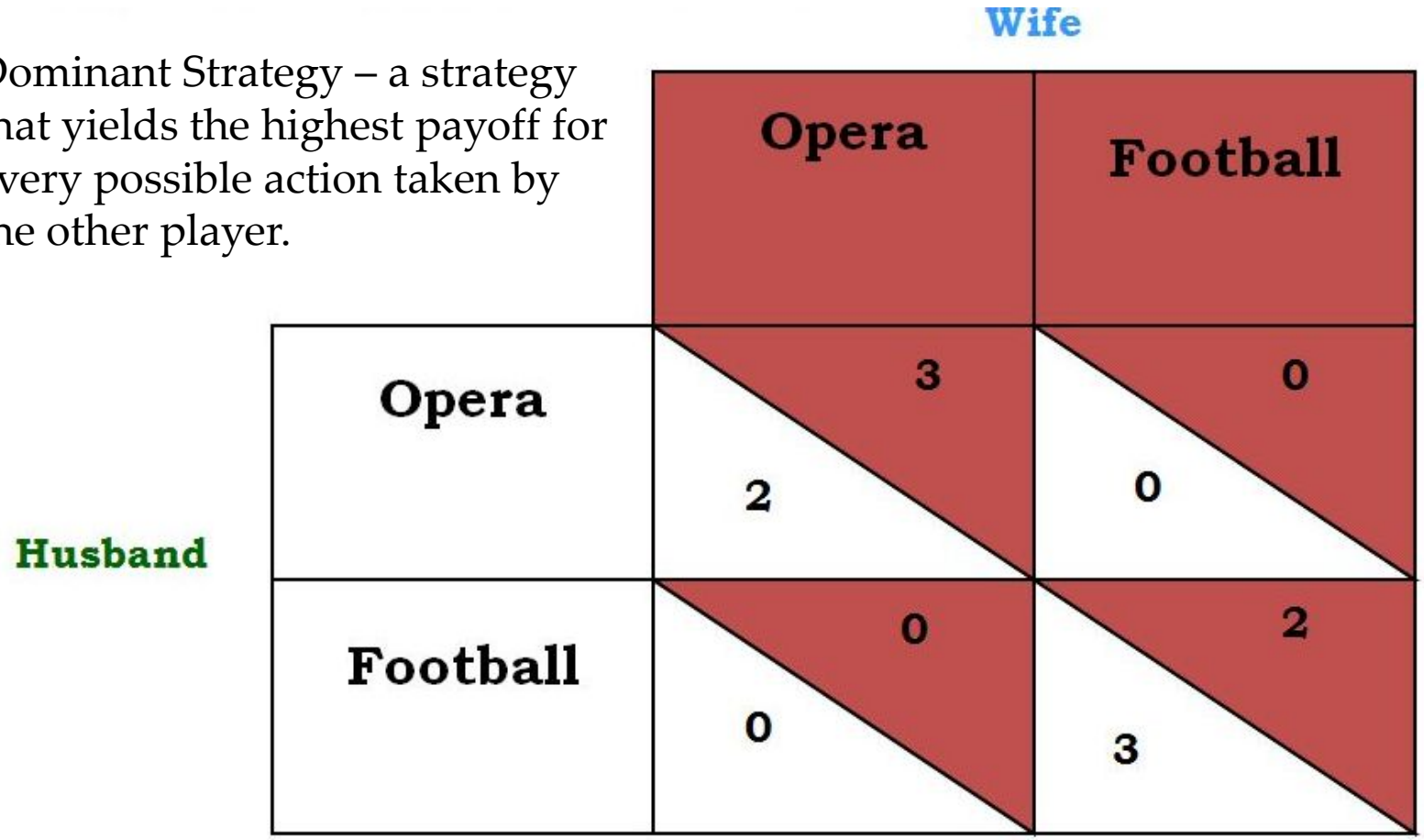
Does a dominant strategy exist?

Dominant Strategy – a strategy that yields the highest payoff for every possible action taken by the other player.

Ajinomoto's Action \ ADM's Action	Cooperate, High Price	Defect, Low Price
Cooperate, High Price	$50 / $50	$60 / $10
Defect, Low Price	$10 / $60	$30 / $30

Does a dominant strategy exist?

Dominant Strategy – a strategy that yields the highest payoff for every possible action taken by the other player.



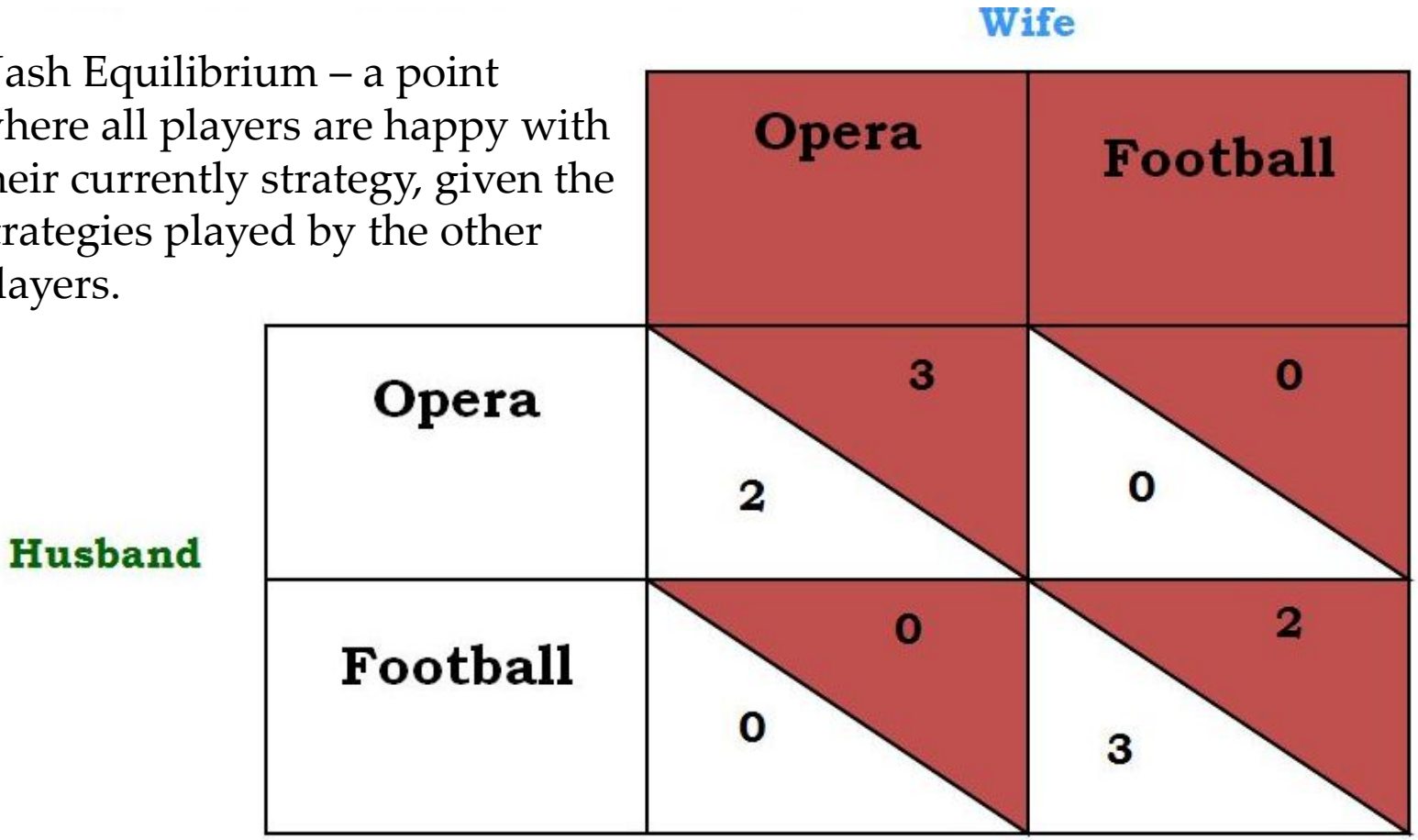
Does a Nash Equilibrium exist?

Nash Equilibrium – a point where all players are happy with their currently strategy, given the strategies played by the other players.

		ADM's Action: Cooperate, High Price	ADM's Action: Defect, Low Price
Ajinomoto's Action	Cooperate, High Price	$50 / $50	$60 / $10
	Defect, Low Price	$10 / $60	$30 / $30

Does a Nash Equilibrium exist?

Nash Equilibrium – a point where all players are happy with their currently strategy, given the strategies played by the other players.



Collusion by tricking government

Advertising Cigarettes – advertising largely steals customers from other cigarette brands, rather than create new smokers.

Reynolds \ Philip Morris	Do Not Advertise	Advertise
Do Not Advertise	$50 / $50	$60 / $20
Advertise	$20 / $60	$30 / $30

Collusion by tricking government

Before 1964 all U.S. tobacco companies advertised heavily on television.

Around 1964-1970, the companies began feeling heat from the Surgeon General, and the companies feared an onslaught of lawsuits.

So in 1974, the companies struck an agreement with the Surgeon General to place warning labels on cigarettes and cease TV advertisements, in return for immunity from lawsuits.

As a consequence, cigarette advertising fell by $63 million, and industry profits rose by $91 million!

Now suppose the *Price-Setting Game* is played repeatedly.

		Player 2: Cooperate, High Price	Player 2: Defect, Low Price
Player 1	Cooperate, High Price	$10 / $10	$15 / $1
	Defect, Low Price	$1 / $15	$4 / $4

Repeating Price Setting Game

If firms/people played this game over and over, what strategies would emerge? What "rules" of strategy would you follow?

- Studies have shown that "tit-for-tat" is a good strategy.
- Using "tit-for-tat", you begin by cooperating for the mutually best outcome, then choose whatever strategy your opponent took in the previous period.

Tit-For-Tat and Tacit Collusion

Folk Theorem: a mathematical proof showing if the price-setting game is played an infinite number of times and players are rational, players will develop *cooperate* strategies, even if they are ultimately competitors.

Tacit Collusion: an unspoken but understood agreement to collude, held together by credible threats of punishment to defectors.

Tacit Collusion in the Real-World

- In the laboratory, tacit collusion readily occurs, but is rare with three or more firms.
- In the real world, there are *some* instances of successul tacit collusion with multiple firms.
- Example: School milk programs in Texas
- "There is an unwritten law that you don't compete. It's been that way for 50 years."

The Repeating Price Setting Game (simplified)

In real markets, this game is played numerous times, and firms receive feedback on the other player's price from last period and can respond accordingly.

Now, firms can employ innovative strategies that encourage collusion *legally*.

The Repeating Price Setting Game (simplified)

Firms need to "change the game" such that *cooperate* is a dominant strategy or Nash Equilibrium for both.

Trigger Pricing: Charge high prices, but let it be CLEARLY known you will slash prices if your competitor sets low prices. The only options now are…

Trigger Pricing in Practice

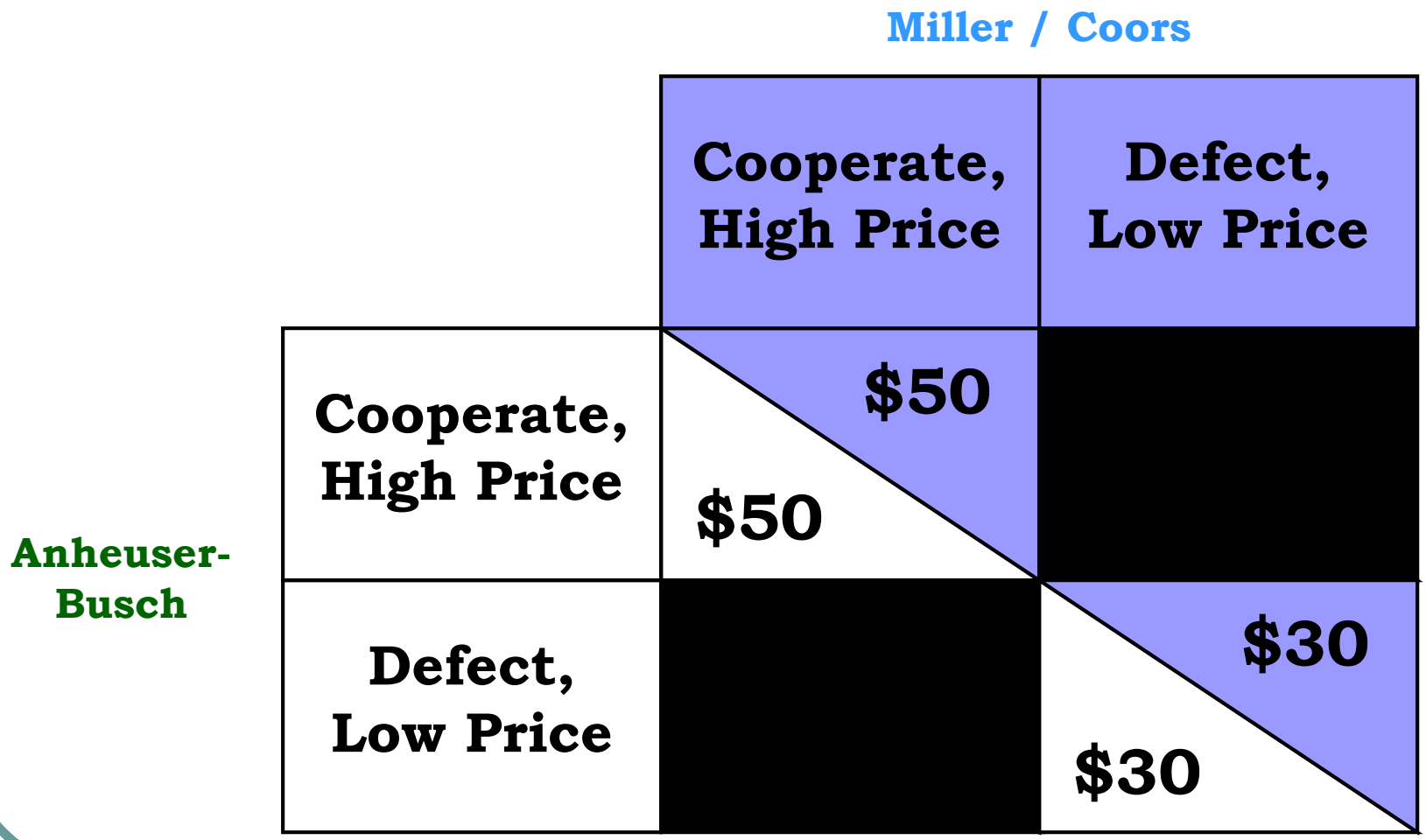
- Two major brewers: Anheuser-Busch and Miller / Coors (in years past, it was Anheuser, Miller, and Coors – 3 firms)
- In 1998, Miller and Coors slashed prices
- Anheuser responded, "**We don't want to start a bloodbath, but whatever the competition wants to do, we'll do**"
- Miller and Coors backed off, raising their prices back to their previous level

Now, *cooperate, cooperate* is a Dominant Strategy and Nash Equilibrium.

Miller / Coors

Anheuser-Busch	**Cooperate, High Price**	**Defect, Low Price**
Cooperate, High Price	**$50** / **$50**	**$60** / **$10**
Defect, Low Price	**$10** / **$60**	**$30** / **$30**

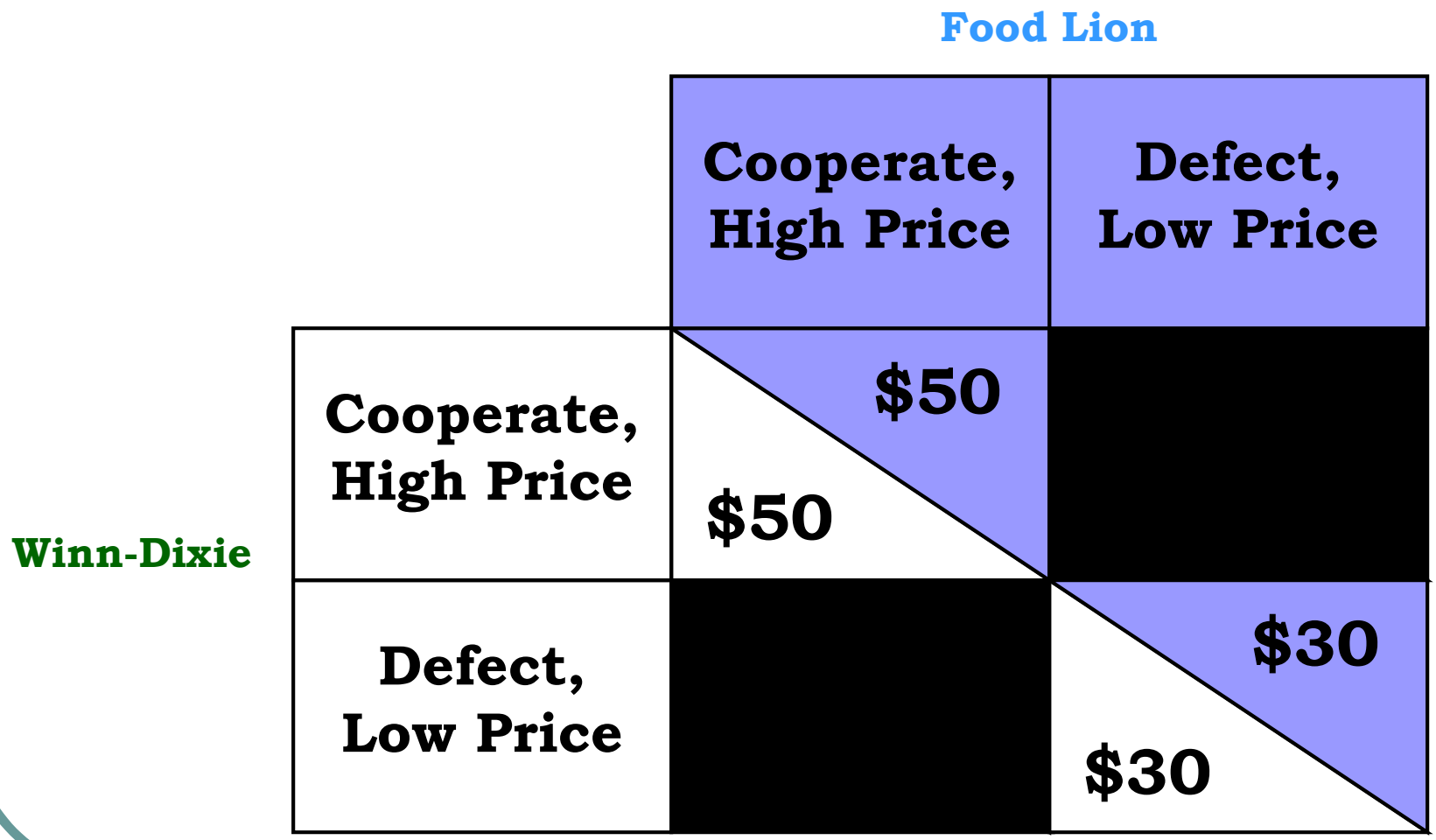
Now, *cooperate, cooperate* is a Dominant Strategy and Nash Equilibrium.



Low-Price Guarantees

- In 1986, Winn-Dixie in Raleigh, NC announced it would match any price set by Food Lion on specific products.
- This also eliminates two possibilities, making *cooperate* / *cooperate* a dominant strategy for both.
- After the low-price guarantee announcement, prices at both stores rose.

Now, *cooperate, cooperate* is a Dominant Strategy and Nash Equilibrium.



Facilitating Tacit Collusion in the Real-World

4 factors that facilitate tacit collusion (200-202)

1. Stable Competitors
2. Pre-Play Communication (trigger pricing, low-price guarantees)
3. Experience with Tacit Collusion
4. Firm Homogeneity (firms with similar costs, etc.)

Adam Smith
Scottish Moral
Philosopher
(1723-1790)

Adam Smith in 1776 gave birth to economics in his book The Wealth of Nations. The A & E channel listed Adam Smith as the twentieth most influential person of the second millennium.

Highlights

(1) Wrote *Wealth of Nations*, which gave birth to economics.

(2) Wrote *A Theory of Moral Sentiments*, which should have been the foundation for modern psychology.

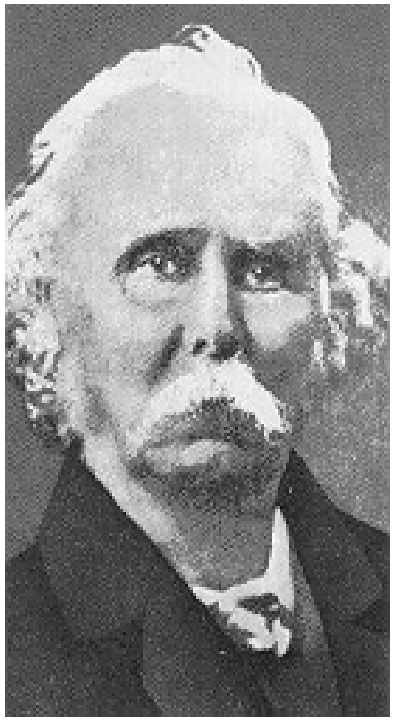
(3) Core Concepts

(3.a) criticize mercantilism

(3.b) specialization and trade

(3.c) self-interest and desirable social outcomes

(3.d) invisible hand of the market



Alfred Marshall
English
Economist
(1842-1924)

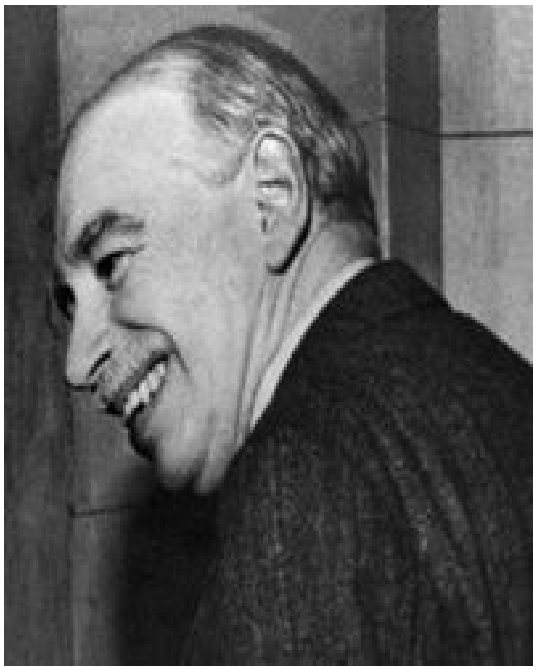
Highlights

(1) Created the supply and demand diagrams ubiquitous in economics courses

(2) Created the concept of elasticity

(3) Created the concept of consumer and producer surplus

(3) Founder of *neoclassical economics*, which believe that prices change quickly so that markets move from one equilibrium to another quickly



John Maynard Keynes
English Economist
(1883-1946)

Highlights

(1) Created economic models explaining the failure of the economy to escape from The Great Depression

(2) Created the notion of using government spending in response to recessions

(3) Loved by liberals for his theories that markets sometimes perform poorly and that government has an important role to play in economics

(4) Founder of *Keynesian Economics*, which contends that market prices are sometimes sticky, making it difficult for markets to move from one equilibrium to the next

Friedrich von Hayek
Austrian-British Economist
(1899-1992)

Highlights

(1) Demonstrated that information is widely dispersed across an economy, prohibiting a government from every collecting adequate information for efficient decision-making

(2) His book *The Road To Serfdom*, demonstrates how modern-day liberalism can easily lead to Fascism, dictatorship, and the like

(3) Loved by conservatives for his emphasis on personal freedom and responsibility, and his view that capitalism was far superior to socialism

(4) Represents the *Austrian School of Economics*, who strongly believe in libertarianism, and commodity money (like gold standard)

Ayn Rand
(1905-1982)

Highlights

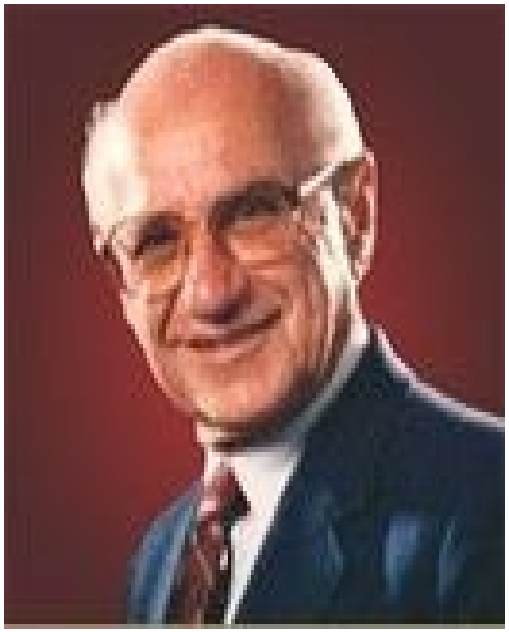
(1) Fiercely independent philosopher, economist (of sorts), and novelist.

(2) Founder of the *objectivist* philosophy, which debases socialist thinking and promotes self-interest as a moral system.

(3) Intellectual inspiration for the modern Libertarian Party.

(4) Wrote the wildly popular novel *Atlas Shrugged*, which describes the thinking of socialists in the 1930s and 1940s with amazing clarity. The novel is about talented entrepreneurs going on strike in response to government takeovers of their businesses.

(5) Her novels *Atlas Shrugged* (Bailey's favorite book) and *The Fountainhead* continue to be one of the highest selling books.



Milton Friedman
American
Economist
(1912-2006)

Highlights

(1) Provided a view of the Great Depression different from Keynes.

(2) Founder of *monetary economics*, which articulate the settings in which printing money can cure recessions or cause inflation.

(3) Loved by conservatives (and libertarians) for his work illustrating the superiority of capitalism and markets over government.

(4) Wrote the wildly popular book *Capitalism and Freedom*, intended for non-economists, demonstrating how freedom produces wealth and happiness, while large governments only destroy wealth and restrict freedom.

(5) Dr. Norwood's favorite and most revered economist.

AGEC 1114 – The Great Depression and Great Recession

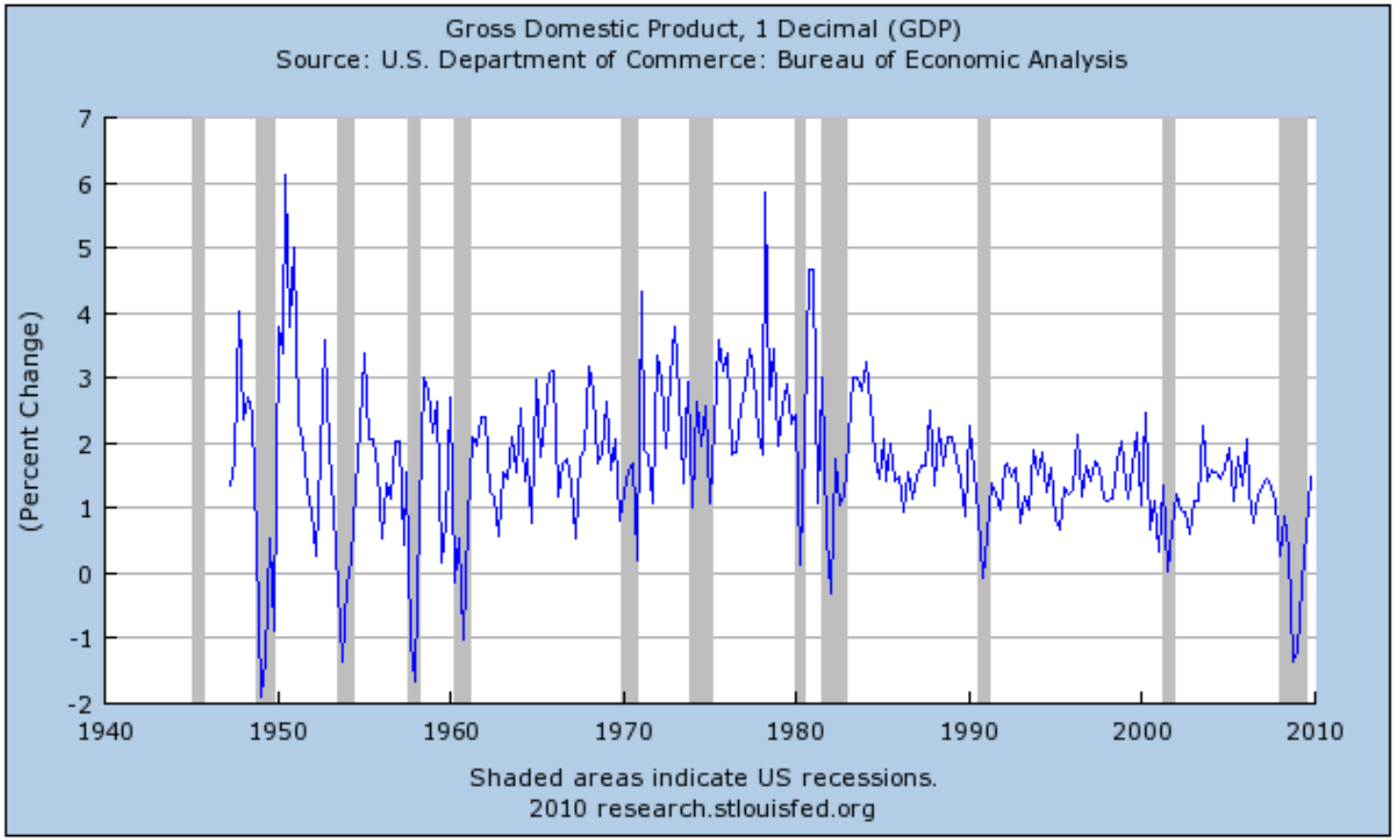
Recalling the Great Depression

Where incomes fell 30% and unemployment was greater than 25%.

In 2008, incomes fell 4% but is now growing and unemployment rose above 10%, but seems to be falling.

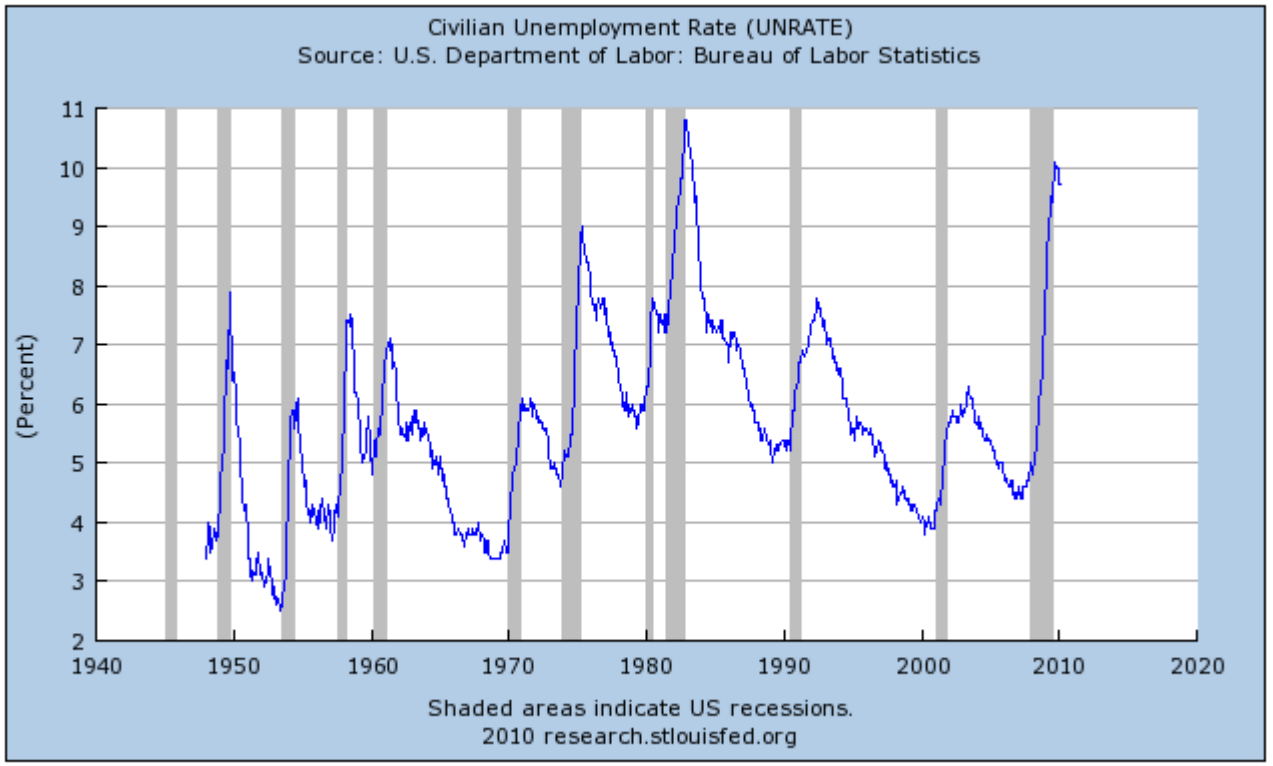
Bailey: update this

Great Depression: Percent Change in U.S. Income



Great Depression: Unemployment Rate

Download Data in Graph | Print | PDF | Link | View Saved Graphs | Save Graph



Prelude to Great Depression

Herbert Hoover elected based on a promise to impose import tariffs, in the name of protecting farmers…

But U.S. was the world leader in ag exporter (and still is), so this would hurt farmers…

Bill being considered by Congress would double tariffs on U.S. imports. Other countries would definitely retaliate with their own tariffs, causing a worldwide collapse in trade…

When bill seemed destined to pass (and it did), stock market loss 1/3 of its value, and a few days later (October 29, 1929) the stock market *collapsed*.

The fall in farm incomes broke rural banks. As the rural, Midwest banks failed, other banks followed.

Capitalism seemed to fail, though governmental policy was really the cause.

Government perhaps helped in some ways, but hindered recovery in many more…

Government began an unprecedented exertion of control over businesses; including price controls, taxes on undistributed profits, encouraging monopolies, even preventing consumers from picking the chickens they prefer at a grocery store, …

Flirting With Socialism During the Great Depression?

Fortune magazine in 1941 asked business leaders: which of the following comes closest to your prediction of the future?

System of free enterprise – 7%

Government will take over much but leave many opportunities to private sector – 52%

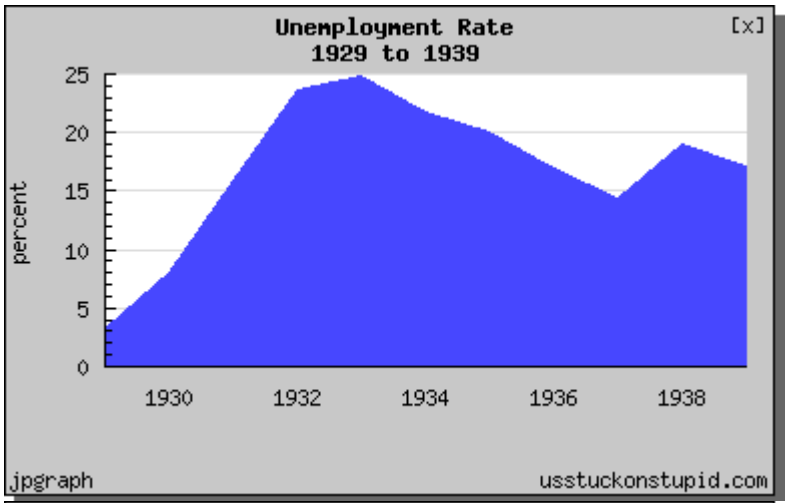
Semi-socialized society with little room for private economy – 37%

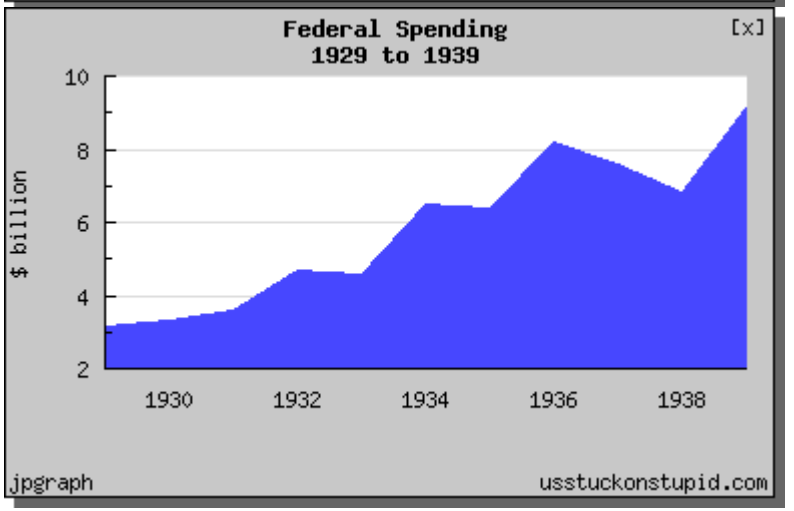
Fascist society – 4%

Why would anyone risk starting or expanding a business?

What Cured the Great Depression?

1. Some say government spending



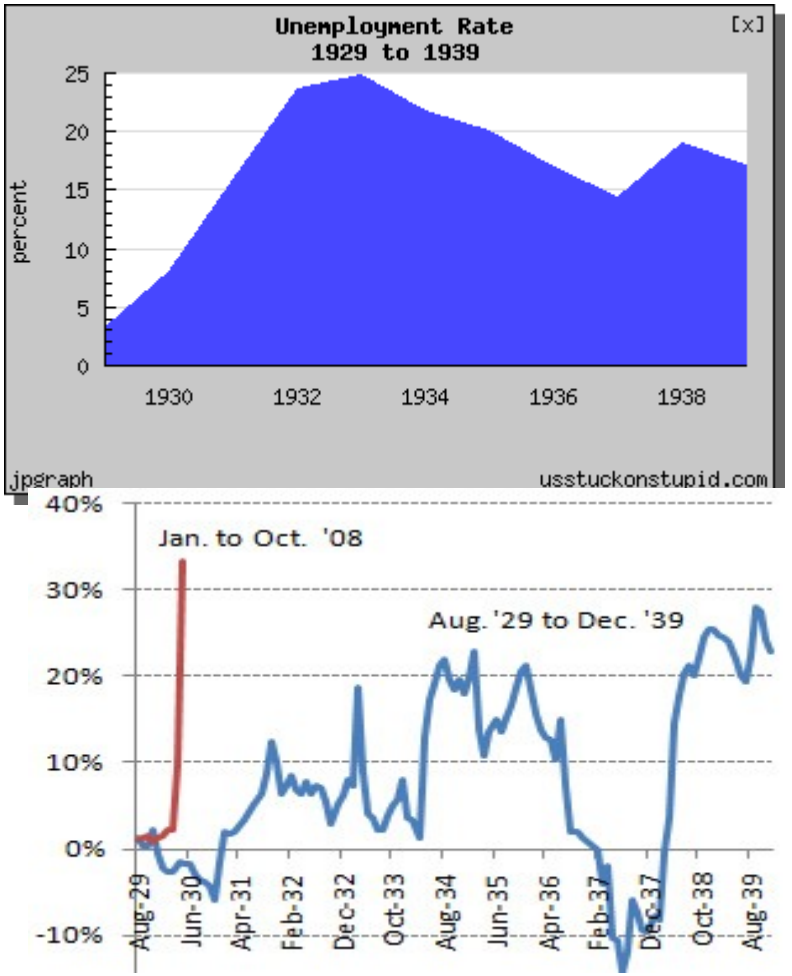


What Cured the Great Depression?

Some say government spending

Some say monetary policy (printing money)

Blue line shows the percent change in money.



What Cured the Great Depression?

Some say government spending

Some say monetary policy (printing money)

Some say World War II (but comparison is absurd)

Some say markets finally worked itself out, and these adjustments were prolonged by government interference.

Impossible to prove the ultimate cure. We have debated *The Great Depression* for decades and we will debate the *current recession* for decades…typically drawing ideological lines.

Cause of Financial Crisis and Subsequent Great Recession

(1) *Bad bets* – homes were overvalued by $5 trillion in a $14 trillion per year economy

(2) *Excessive leverage* – investors had insufficient collateral to cover their loses

(3) *Domino Effects* – to illustrate: if 20% of home-owners decided to sell their homes, that would decrease the value of *everyone's* home

(4) *21st Century Bank Runs* – many investment banks acted much like "regular" banks, and require the confidence of their investors to operate. Investment banks are like banks for rich people, and they experienced a lack of confidence and their funds were withdrawn.

But Why Did So Many People Make Bad Bets?

(1) It just happens sometimes. Bailey: put stuff about bubbles

(2) The U.S. government had historically shown a willingness to "bail out" creditors (people lending the money to investors) when a large failure occurs. This "too big to fail" policy allows investors keep profits in good times, but pass on losses to taxpayers in bad times. Not surprisingly, this encourages very risky investments—like houses.

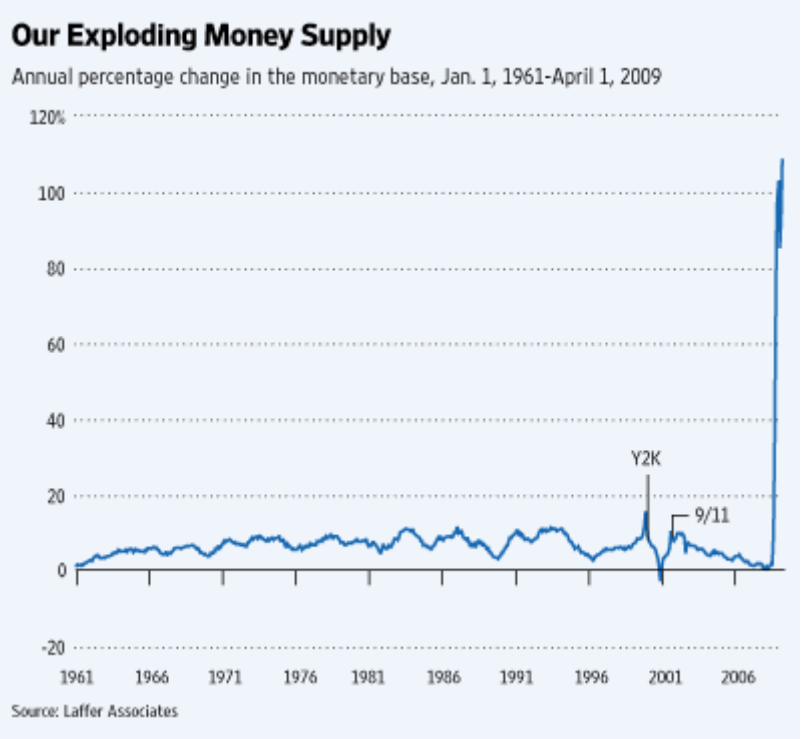
1. The U.S. Government has provided firms with additional cash in return for partial ownership of firm, purchasing some of firms' assets at high prices, and has bailed out a number private banks and *de facto* government banks (e.g. Fannie Mae).

Total Amount To Be Spent Around 3.8 trillion in a 14 trillion per year economy.

Confronting the Great Recession

But Why Did So Many People Make Bad Bets?

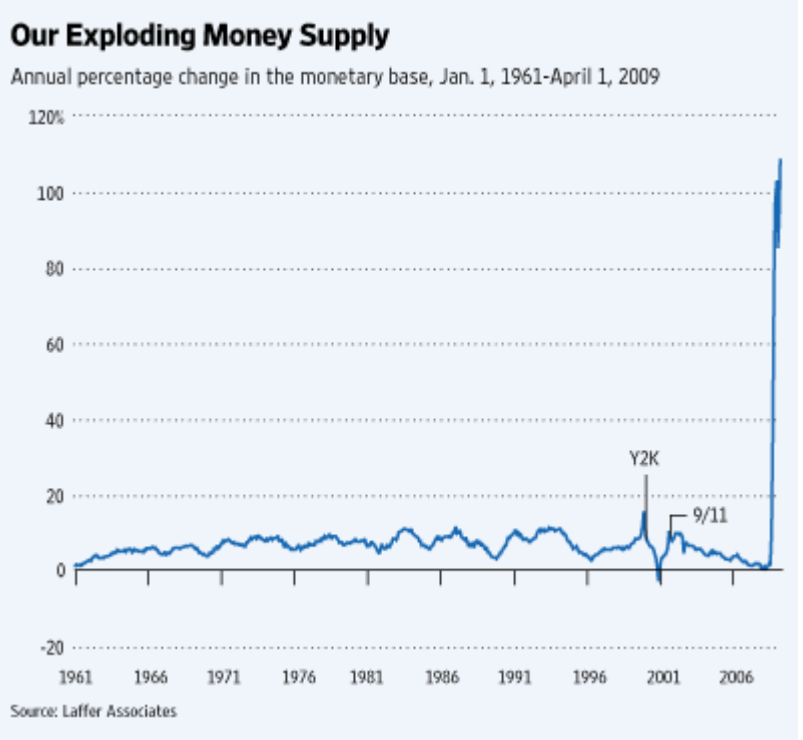
2. The *Federal Reserve* has also printed tons of money, and used that money to purchase government bonds from citizens and businesses, giving the citizenry free money. *Notable is the fact that this money was not taken out of the economy before spending it.*



However, the Federal Reserve keeps much of this money from entering the economy by paying high interest rates on accounts. Basically, no one understands what the Federal Reserve is "really" doing or trying to do.

To combat the recession, the Federal Reserve has printed about $1 trillion of new money, doubling the amount of dollar bills!

3. 2008 Bush/Congress enacted a 0.157 trillion stimulus through tax cuts; 2009 Obama/Congress enacted a 0.902 trillion stimulus (**in a 14 trillion per year economy).** *This money was borrowed from Americans and foreign investors before it was spent in the U.S.*



Does printing money help? Most all economists say yes, if there is substantial unemployment. However, it has the potential to cause dangerous recession/inflation later. Moreover, we don't know if the Federal Reserve is really "printing money" or not.

Does the stimulus help? Conservative economists tend to say no; liberal economists tend to say yes.

Some Conservative Economists: a stimulus simply does not work

Some Conservative Economists: it could help, but will be exploited by liberals to expand government for long periods

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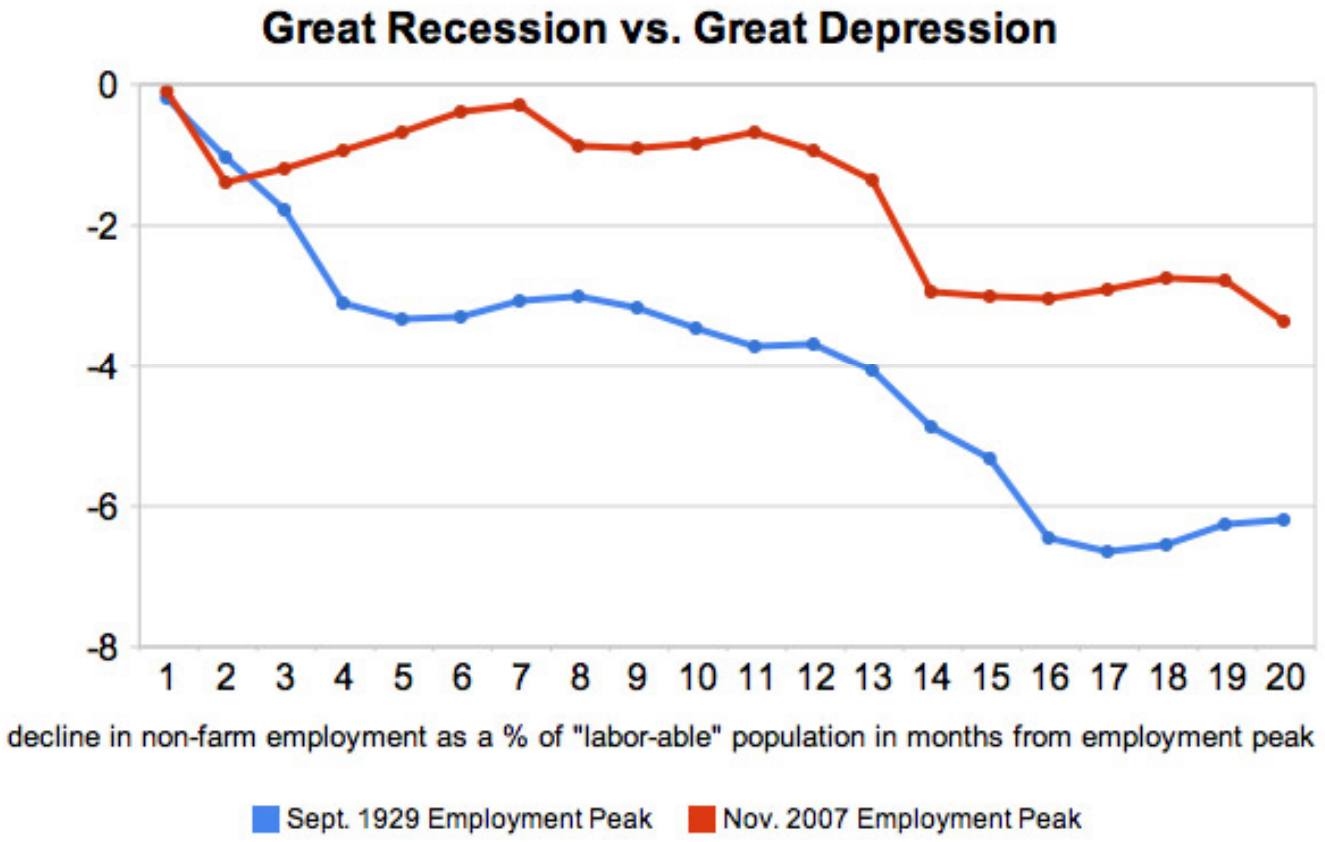
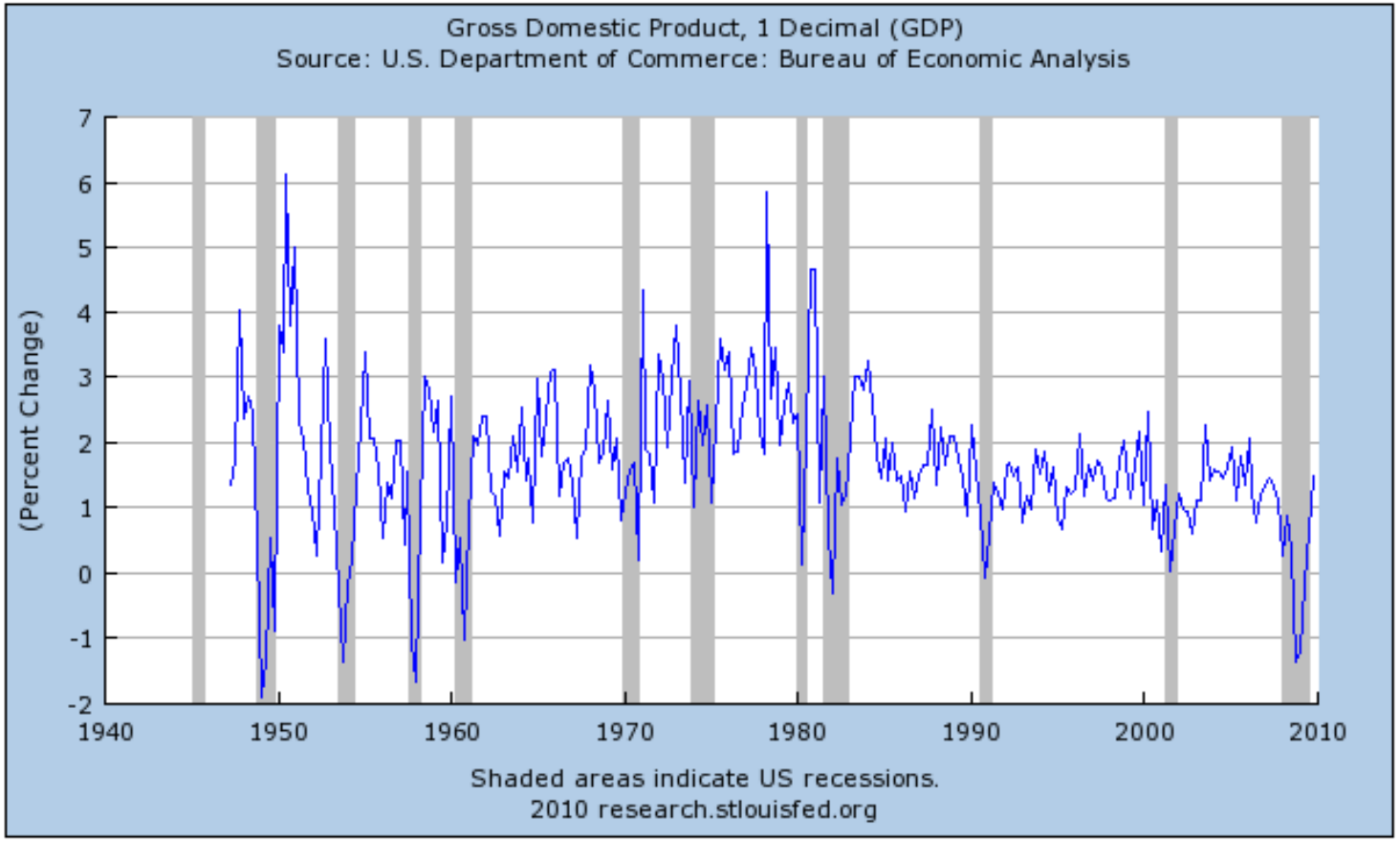
The Great Depression vs Great Recession



The Current Recession

Percent Change in U.S. Income



The Current Recession

Unemployment Rate

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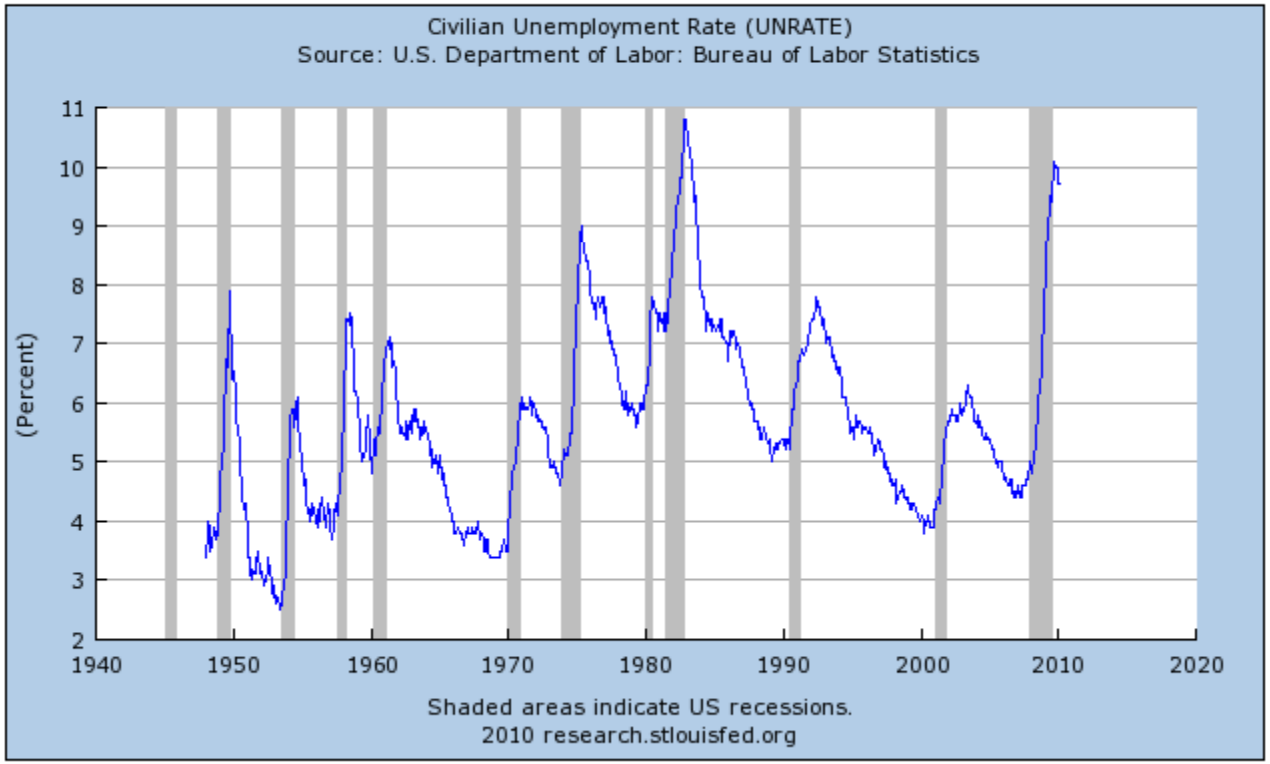

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(4) When bill seemed destined to pass, stock market loss 1/3 of its value, and a few days later (October 29, 1929) the stock market *collapsed*.

What Caused the Great Depression?

(5) Due to world-wide collapse in trade, farm incomes plummeted…

(6) Banks in Mid-West began to fall at a tremendous rate..

(7) Bank runs began occurring everywhere, and the banking sector as a whole crumbled…

What is a bank run?

What Caused the Great Depression?

(8) Capitalism seemed to fail, though governmental policy was really the cause.

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Government and the Current Recession

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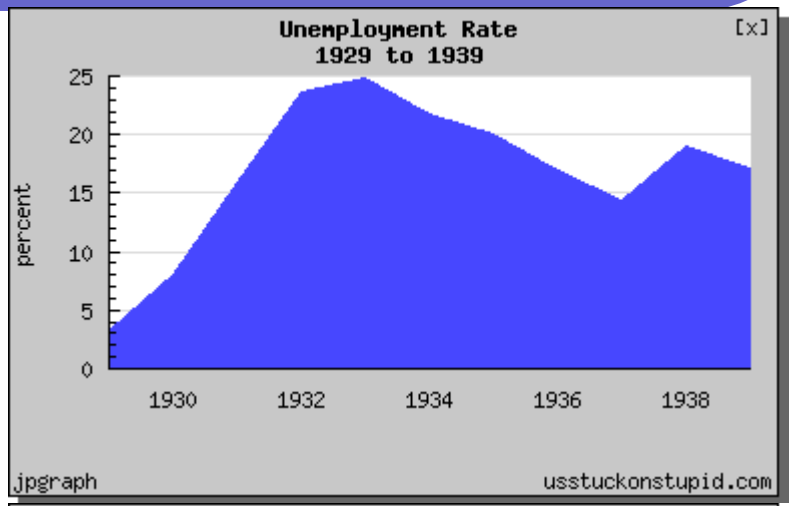

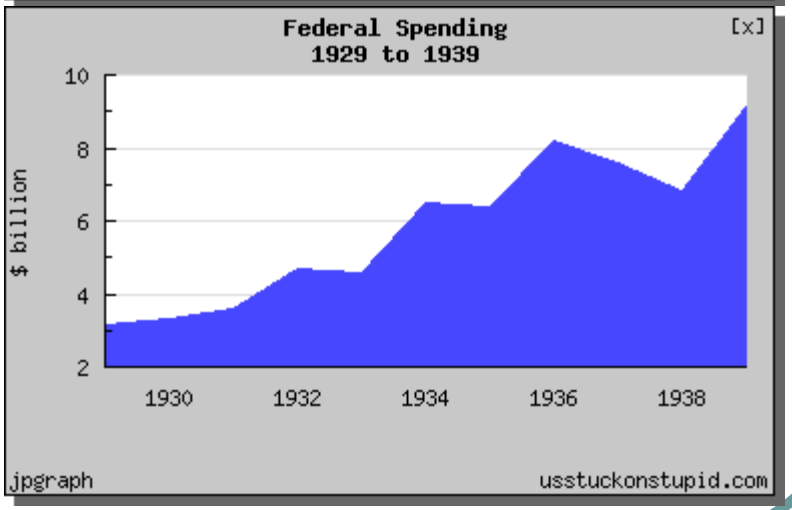

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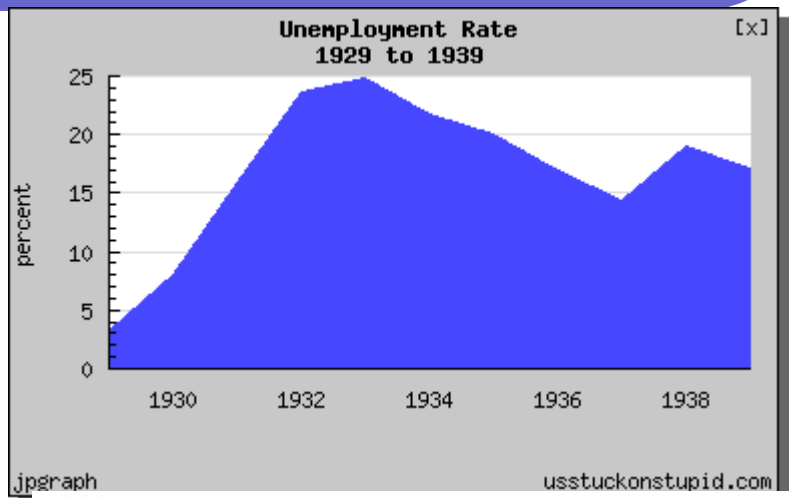

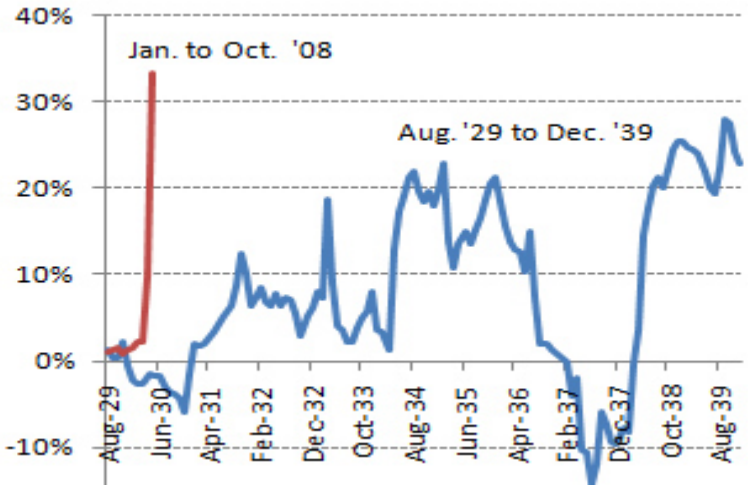

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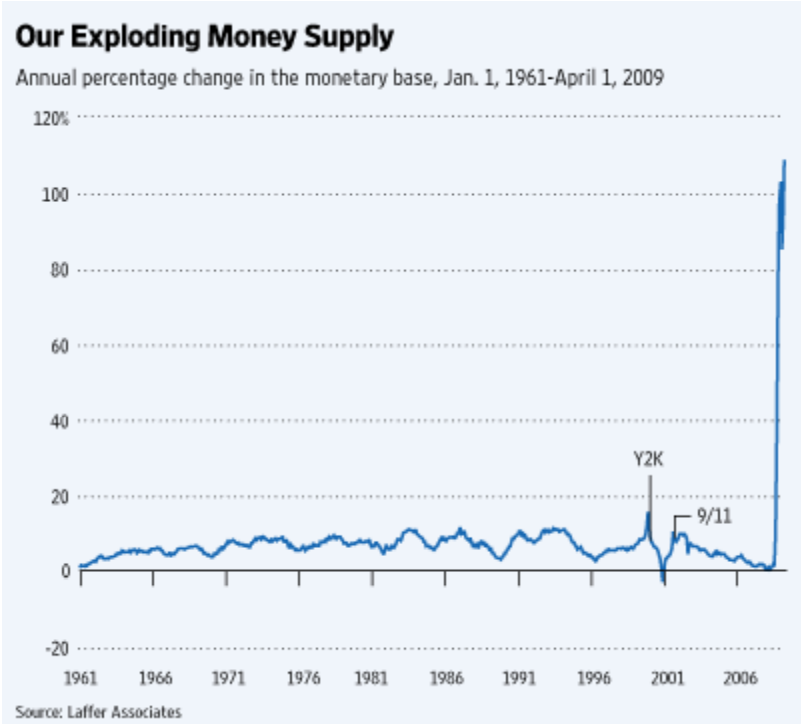

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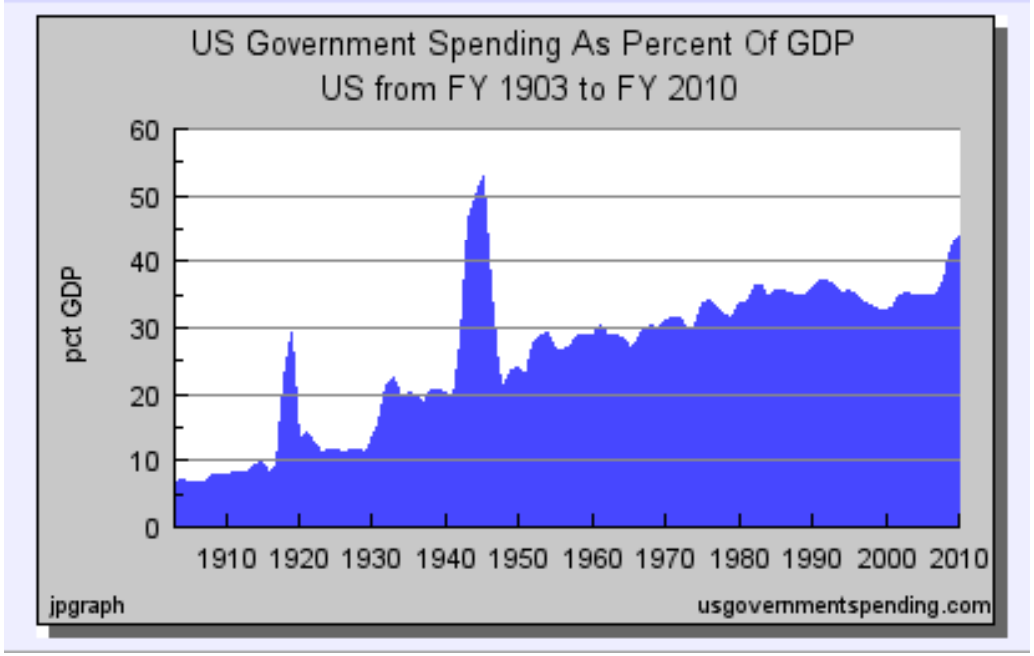

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Fighting Current Recession

http://www.theonion.com/video/in-the-know-should-the-government-stop-dumping-mon,14289/

Fighting Current Recession

Are we running dangerous fiscal deficits?

http://www.usdebtclock.org/

Fighting Current Recession

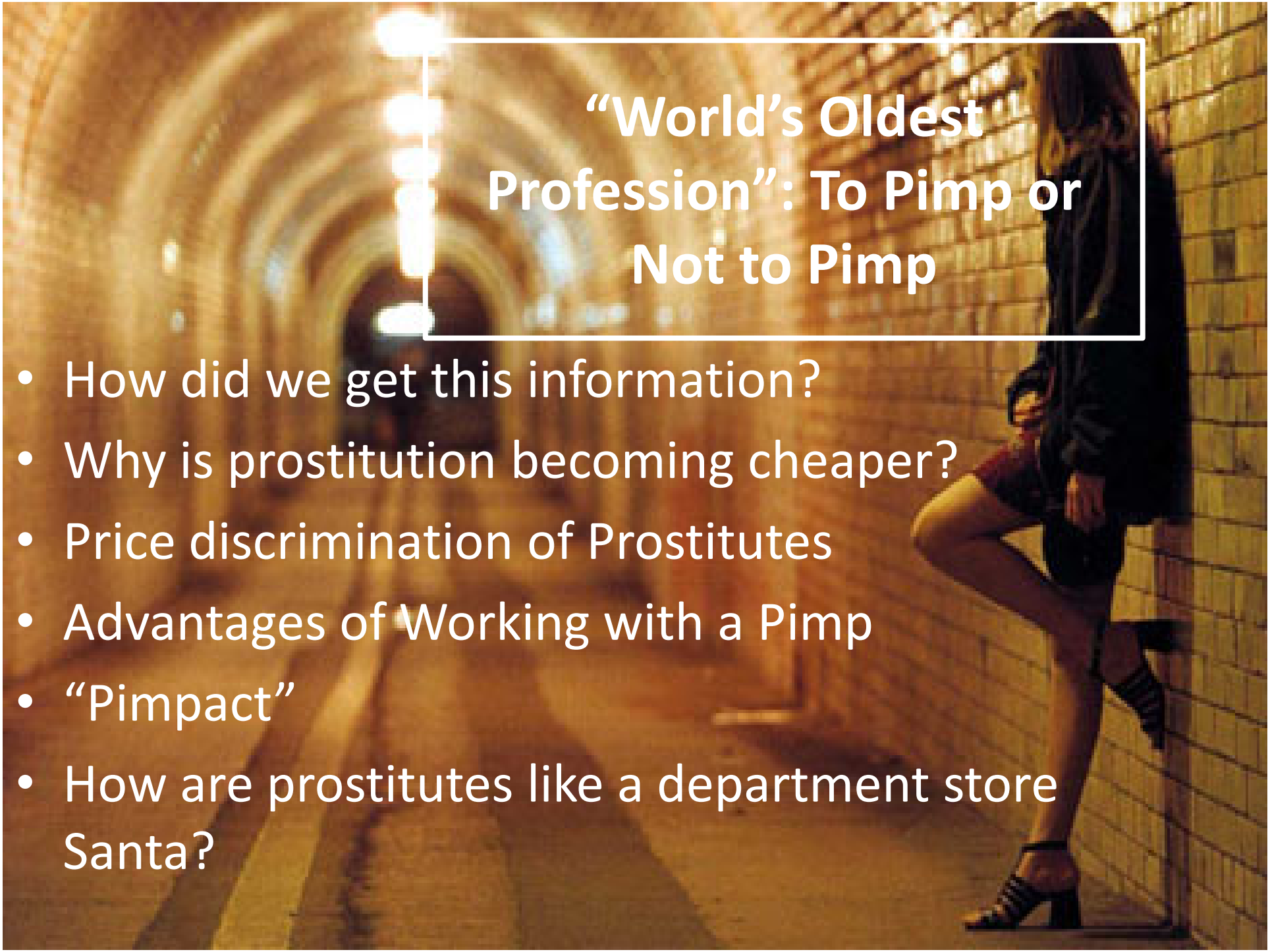
The Great Danger

We are borrowing money not to invest, but for current consumption.

Congress will encourage the Federal Reserve to print lots of money, allowing inflation to reduce the real amount of debt Americans must pay.

But, inflation is just another type of tax.


Pimping and Pushing
By: Emma Rupert



"World's Oldest Profession": To Pimp or Not to Pimp

- How did we get this information?
- Why is prostitution becoming cheaper?
- Price discrimination of Prostitutes
- Advantages of Working with a Pimp
- "Pimpact"
- How are prostitutes like a department store Santa?

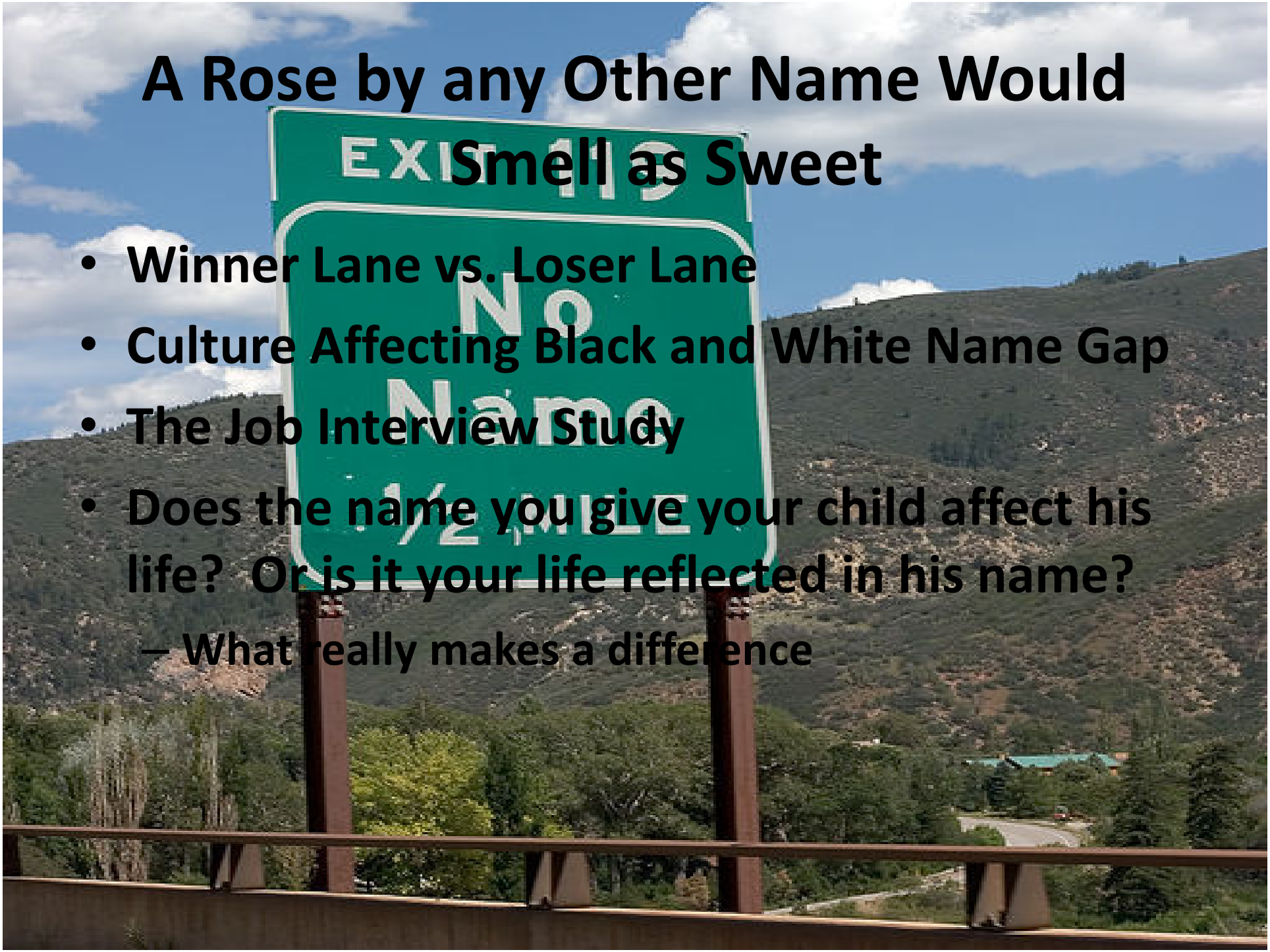
The Business of Dealing Crack

- Sudhir “Sid” Venkatesh and the Black Gangster Disciple Nation
- J.T. was the gang-leader, making $100,000 per year (tax-free)
- J. T. reported to a Board of Directors who each made $500,000 per year
- Gangs consisted of
- 1.a enforcers
- 1.b treasurer
- 1.c runners

Business of Dealing Crack

2) Foot soldiers – 25% chance of being killed (more likely to die than Texas death row inmates). Make $3.30 per hour and live with their moms. Toke the risk in hopes of being a gang-leader or on board of directors.

3) rank-and-file members – often paid to be member, in hopes of being a foot soldier one day



A Rose by any Other Name Would Smell as Sweet

- Winner Lane vs. Loser Lane
- Culture Affecting Black and White Name Gap
- The Job Interview Study
- Does the name you give your child affect his life? Or is it your life reflected in his name?
  - What really makes a difference

The Twenty “Whitest” Girl Names

1. Molly
2. Amy
3. Claire
4. Emily
5. Katie
6. Madeline
7. Katelyn
8. Emma
9. Abigail
10. Carly
11. Jenna
12. Heather
13. Katherine
14. Caitlin
15. Kaitlin
16. Holly
17. Allison
18. Kaitlyn
19. Hannah
20. Kathryn

The Twenty “Blackest” Girl Names

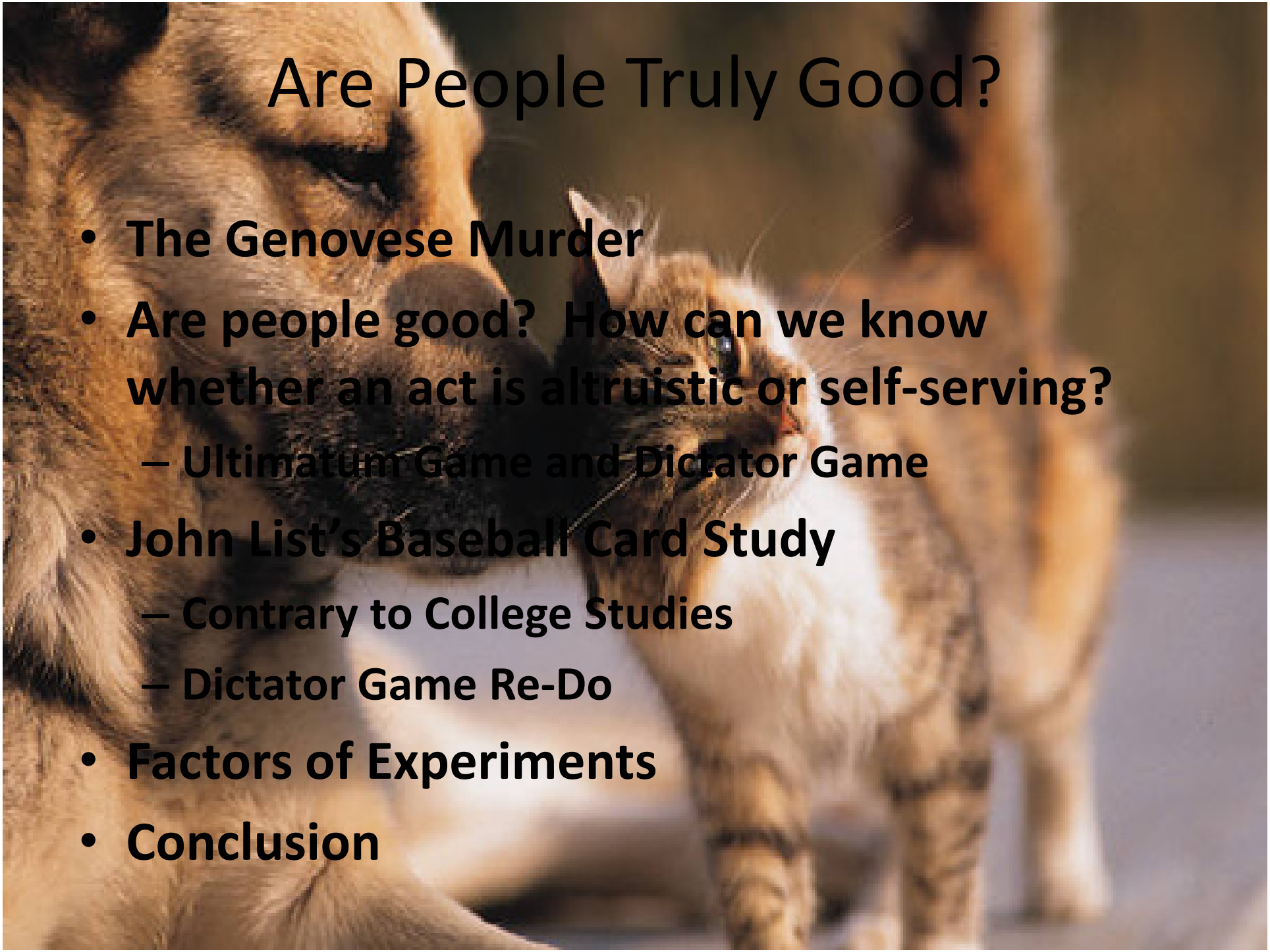
1. Imani
2. Ebony
3. Shanice
4. Aaliyah
5. Precious
6. Nia
7. Deja
8. Diamond
9. Asia
10. Aliyah
11. Jada
12. Tierra
13. Tiara
14. Kiara
15. Jazmine
16. Jasmin
17. Jazmin
18. Jasmine
19. Alexus
20. Raven

The Twenty “Whitest” Boy Names

1. Jake
2. Connor
3. Tanner
4. Wyatt
5. Cody
6. Dustin
7. Luke
8. Jack
9. Scott
10. Logan
11. Cole
12. Lucas
13. Bradley
14. Jacob
15. Garrett
16. Dylan
17. Maxwell
18. Hunter
19. Brett
20. Colin

The Twenty “Blackest” Boy Names

1. DeShawn
2. DeAndre
3. Marquis
4. Darnell
5. Terrell
6. Malik
7. Trevon
8. Tyrone
9. Willie
10. Dominique
11. Demetrius
12. Reginald
13. Jamal
14. Maurice
15. Jalen
16. Darius
17. Xavier
18. Terrance
19. Andre
20. Darryl



Are People Truly Good?

- **The Genovese Murder**
- **Are people good? How can we know whether an act is altruistic or self-serving?**
  - **Ultimatum Game and Dictator Game**
- **John List's Baseball Card Study**
  - **Contrary to College Studies**
  - **Dictator Game Re-Do**
- **Factors of Experiments**
- **Conclusion**

Altruism and Social Desirability Bias in Ag Econ Research

Do you agree with the statement: *low meat prices are more important than the well-being of farm animals?*

16% Americans agree

Do you agree with the statement: *the average American feels that low meat prices are more important than the well-being of farm animals?*

68% Americans disagree

Why the difference? People lie to make themselves look and feel good (even in anonymous phone surveys), but care little to make others look good!

Altruism and Social Desirability Bias in Ag Econ Research

Would you pay more for an environmentally friendly dishwashing liquid?

Predicted market share about 20%

Would the average American pay more for environmentally friendly dishwashing liquid?

Predicted market share about 5%

Then we placed this dishwashing liquid on sale for the first time in Stillwater.

Actual market share was 0%

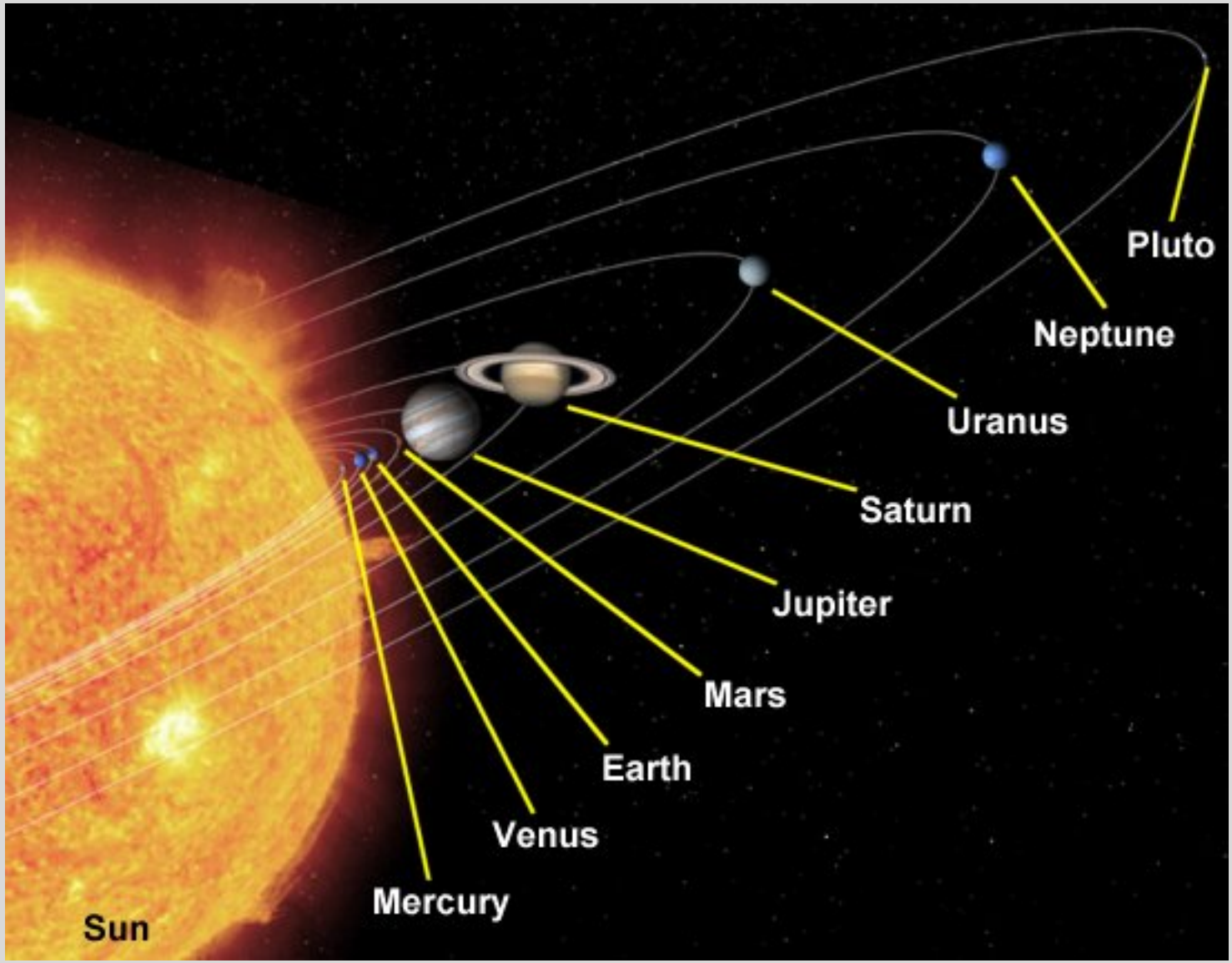
We can better predict shopping behavior by asking people what they think *others* would do, rather than what *they* would do! Referred to as *inferred valuation*.

(Q1) Practice Question – how well do you understand economic principles?

Suppose: The marginal cost of hogs to hog producers, at current consumption levels, is $50 per cwt. The average economic harm from greenhouse gas emissions resulting from hog production is $20 per cwt. Thus, the marginal cost of producing hogs is $60 per cwt. The market price of hogs is $50. Remember that, in equilibrium, price equals the marginal value. What does this story suggest?

(a) That the cost of hog production is larger than the value consumers receive, thus, consumers should cease eating pork.	**(c) It suggests nothing. Markets do not, and should not, consider the cost of negative externalities when forming price and quantity.**
(b) That the cost of some hogs is larger than the value consumers receive, thus, consumers should reduce their pork consumption until marginal value equals or exceeds $60 per cwt.	**(d) That the cost of hog production is larger than the value consumers receive, thus, consumers should consume the same amount of pork, but should compensate those who are harmed by the pollution.**

(Q2) Why is Venus hotter than Mercury?



(Q3) How reliable are climate forecasting models that attempt to predict the impact of greenhouse gases on the climate?

Answer: Very unreliable.

Good military commanders attempt to predict the number of deaths and wounds from a strategy, despite the fact that those predictions are very inaccurate, because some plan, however inaccurate, is better than no plan. The same can be said for global warming.

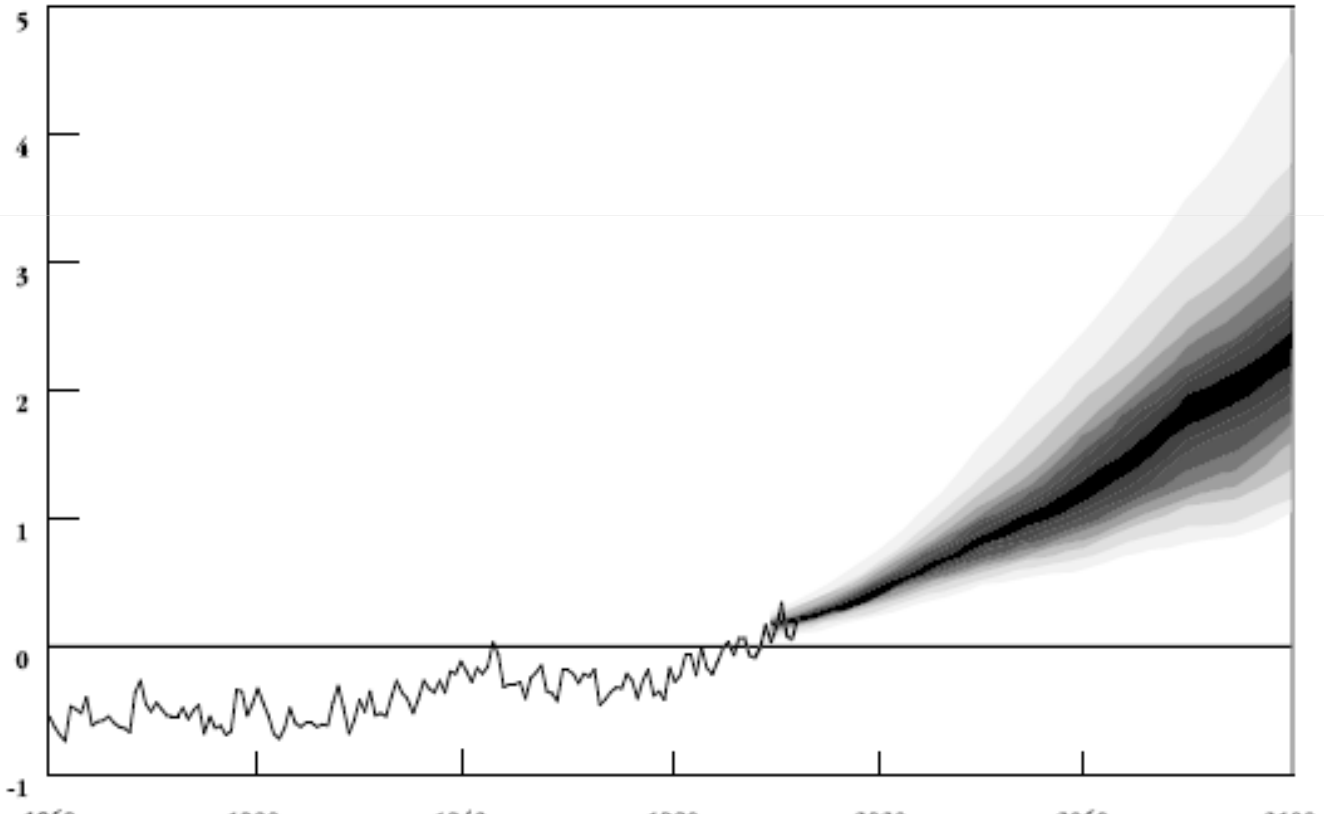
AGEC 1114 – Lecture on November 13, 2009

There is some probability global warming will occur, some probability it won't. Let's assume the probability of the former is large enough to warrant attention (but not necessarily action).

Figure 7.

Historical and Projected Climate Change

(Average Global Temperature (°C) Relative to 1986-1995 Average)



Source: Congressional Budget Office. Historical data are from the Hadley Centre for Climate Prediction and Research, available at www.met-office.gov.uk/research/

Considerations

(1) If we reduce greenhouse gas emissions, what is the opportunity cost?

Economic experts were asked: *What would be the best ways of advancing global welfare, and particular the welfare of developing countries, supposing that an additional $50 billion of resources were at governments' disposal?*

Ranking of activities (1 = best, 17 = worse)

1. control of HIV/AIDS	4. Control of malaria
2. providing micronutrients	9. Lowering the cost of starting a new business
3. trade liberalization	15. carbon tax

Considerations

(2) What is the best way to show consideration towards future generations, assuming that fighting global warming would cost us 3% of our income, or 420 billion.

Would two generations from now rather have the average global temperature only increase by one or two degrees, or would they rather us set aside 420 billion every year for 60 years, and let it accumulate interest at 3%, totaling 68.4 trillion dollars in 60 years (five times our nations' annual income)?

Considerations

(3) Accounting for the fact that other large countries, such as China and India, are not planning on curbing their greenhouse emissions, the benefits of fighting global warming are virtually zero and the cost is around 420 billion each year.

Considerations

(4) Every generation is richer than the last generation, especially in modern times. Even under the worst-case scenario, failure to curb global warming simply implies that people in the developing world would be "only" 8.5 times as wealthy as a century from now, compared to 9.5 times if there was no climate change.

Why should we reduce our incomes by 3% every year when future generations will still be richer than us if we didn't?