

AEA Committee on Economic Education Poster Session

An Interactive Graphing Activity Philadelphia, PA 2014

Website: <http://econwiki.com/aeaposter2014>



Video: <http://www.youtube.com/watch?v=k5plAh54TI4>

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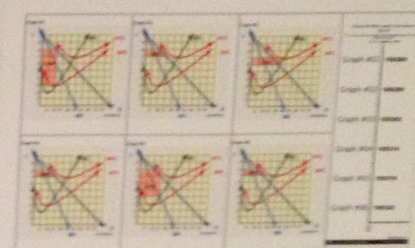
email: paul.tomolonis@uconn.edu, phone 860-486-3022

GRAPHING ACTIVITY

<http://econwiki.com/aeaposter2014>

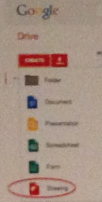


UConn
UNIVERSITY OF CONNECTICUT



GOOGLE

DRAW



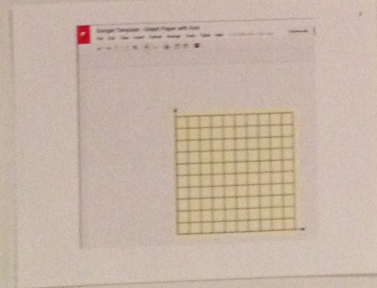
In This Drop Down

- Set Access Restrictions
- Students Make A Copy
- Get Url & Imbed HTML

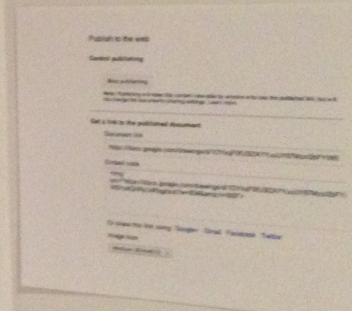
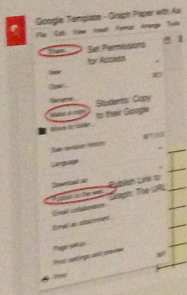
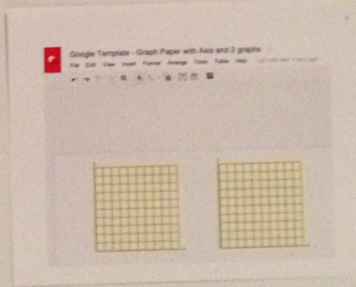
Publish To The Web
Get HTML for:

- URL to share
- Imbed Image on page

TEMPLATE #1
One Grid



TEMPLATE #2
Two Grids



SAMPLE EXERCISE

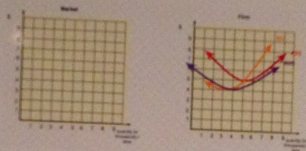
REPRESENTATIVE EXERCISE Perfect Competition: Question

DIRECTIONS: 10 possible points
The initial diagram has two panels. The left panel will be used to represent the market supply and demand for good X, and the right panel will be used to represent the demand the individual firm faces, and the firm's cost curves.

One point each for:

- 1 In the left graph draw a supply and demand curve such that the equilibrium price is \$7 and the quantity is 5 thousand.
- 2 Label the demand and supply curves, and place a black dot at the equilibrium.
- 3 Using the information in the market graph, in the right panel draw the demand curve the firm faces.

STUDENT TEMPLATE



4 Label the demand curve and place a white dot at the profit maximizing point (at the intersection of demand and MC).

5 Shade in the rectangle for Total Cost at the profit maximizing output, and label the rectangle.

6 Shade in the rectangle for Profit at the profit maximizing output, and label the rectangle.

Four points for:

EXPLANATION: report the total profit for the firm and show your calculations.

EXPLANATION: Place a dot at the breakeven and the shutdown points, and explain the profit level at each of these points.

REPRESENTATIVE GRAPHS Perfect Competition: Answer

EXPLANATION:

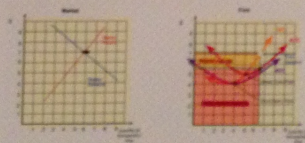
$$\begin{aligned} \text{Profit} &= \$1.5 \times 6,500 \text{ units} = \$9,750 \text{ or} \\ \text{Profit} &= \text{Revenue} - \text{Cost} \\ &= \$7 \times 6,500 \text{ units} - \$5.5 \times 6,500 \\ &= \$9,750 \end{aligned}$$

Price = \$7 as given by equilibrium in the market graph (perfect competition, firms are price takers).

Quantity = 6,500 units given by MR=MC point. MR = \$7, crosses MC at (about) 6,500 units.

Cost is found by the crossing of the ATC curve at the quantity sold = \$5.5 at 6,500 units (see above).

ANSWER



EXPLANATION:

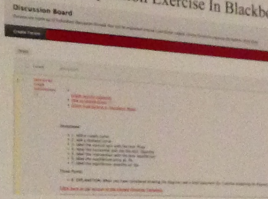
Shutdown is the point where economic profits are zero. This occurs when price is just equal to minimum average total cost (i.e. where MC crosses the ATC), and there is no incentive for firms to enter or exit. It is the entry and exit point for firms that will drive market demand and hence firm demand to this point. The shutdown point is where the firm just covers total variable costs. Firms will stay in the market to maintain a market share, but below this point they will exit. Below the shutdown point they add to the loss they are taking on fixed costs.

BlackBoard CMS

Post-First Discussion

Forum

Perfect Competition Exercise In Blackboard



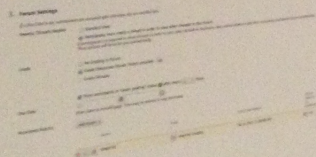
List of Submissions

A screenshot of a Blackboard List of Submissions interface. The title is "List of Submissions". Below the title, there is a table with columns for "Submission", "Submitted", and "Graded". The table contains several rows of data, including submission IDs, submission dates, and grades. The interface is clean and professional.

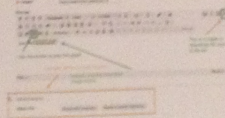
To Review Submissions Use "Collect" to Display Graphs In A Wall



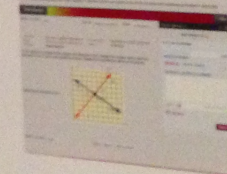
FORUM SETTINGS



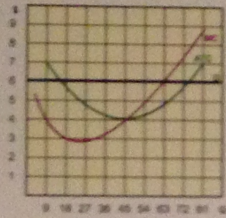
For Student Posts: Graphs Are Inserted, Not Attached



To Grade, Select "Grade" Option



MULTIPLE CHOICE



WIKI SPACES
FREE SPACE
TO HOST
GRAPH POSTS

The exhibit depicts the short-run cost curves of a perfectly competitive firm. Suppose the market price is \$6. The firm's profit-maximizing output is approximately _____.

- A. 150
- B. 175
- C. 45
- D. 60

The exhibit depicts the short-run cost curves of a perfectly competitive firm. Suppose the market price is \$9. The firm's profit-maximizing output is approximately _____.

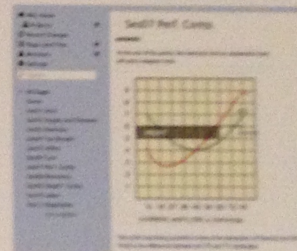
- A. 37.5
- B. 45
- C. 60
- D. 75

The exhibit depicts the short-run cost curves of a perfectly competitive firm. Suppose the market price is \$9. The firm's profit is approximately _____.

- A. \$375
- B. \$450
- C. \$600
- D. \$750

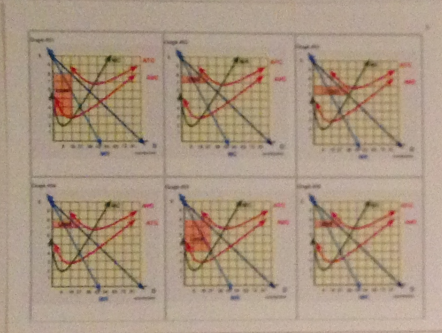
The exhibit depicts the short-run cost curves of a perfectly competitive firm. Suppose the market price is \$6. The firm's total revenue is approximately _____.

- A. \$450
- B. \$375
- C. \$600
- D. \$750

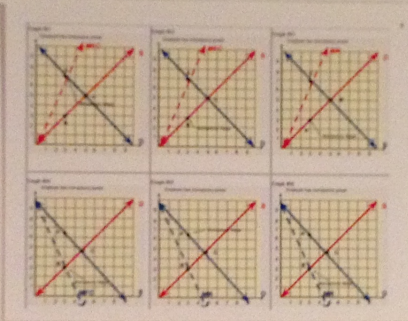


POLL EVERYWHERE

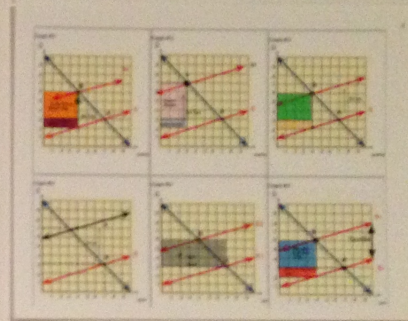
Which Diagram Correctly Depicts Profit for the Monopolist?



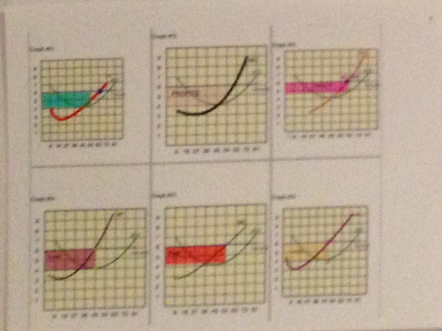
Which Diagram Correctly Depicts Wage Offer of Monopsony?



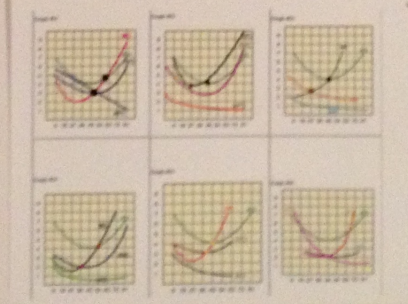
Which Diagram Correctly Depicts Tax Shifting?



Which Diagram Correctly Depicts Profit of Perfectly Competitive Firm?



Which Diagram Correctly Depicts The Set of Short Run Cost Curves?



Test the code of the correct diagram to 37607 or submit the code to <http://Poll Everywhere.com>

Graph #1	Submit
Graph #2	Submit
Graph #3	Submit
Graph #4	Submit
Graph #5	Submit
Graph #6	Submit

As instructors we know student engagement is key to improving learning outcomes. But when it comes to preparing for class we appreciate new ideas for engaging activities. Our poster session will demonstrate this type of activity. We have developed an activity that consists of problem sets where students use Google Draw to create diagrams like the ones they see in their textbooks. We have found students are engaged by the activity. Many already know how to use Google Draw (its tools are intuitive), they are responsive to the challenge of creating a variation of a diagram they have studied in their textbook, and many like to manipulate objects on their computer screens. We have found that as instructors the range of topics that the basic template can be used for is quite extensive.

TEACHING STRATEGY OF THE ACTIVITY

There is one graphing activity assignment per session. These are unique and were designed by the team specifically for this course. They require the higher order thinking of analysis and evaluation. These are the most challenging. They exercises are practical applications to real world problems and represent the goal that the course is preparing the student for – to apply economic principles to real world problems.

The principal purpose of the activity is to give students the opportunity to practice drawing economic diagrams representing the core principles of each chapter in their principles textbook. The idea is one of learning by doing. Drawing the diagram will reinforce their

understanding of the economic concept. The diagrams are posted to a discussion forum within the course management system. The forum is a post first type, after posting the student can view group wall of the posts of other students. The group wall has the externalities that students can learn from peer postings and receive constructive comments for their contributions. The diagrams directly relate to a course goal that the student leaves the course with the ability to “explain and sketch on the back of an envelope the fundamental concepts and diagrams covered in the course”.

The concepts selected for the activity can range from simple to complex. One activity is to simply draw the family of short run cost curves. Even for what we think is such a simple activity, as an instructor, the variety of presentations and the range of understanding demonstrated may amaze you at. A more advanced activity is to draw and explain the effects of imposing a minimum wage in the case of a monopsony labor employer. A further extension of the activity is to create a collage with a correct diagram and several diagrams with common mistakes. Then using polling system students can critique the diagrams and vote for the correct diagram, or at least the one with the fewest mistakes.

HOW THE ACTIVITY IS CREATED

The basic template for the activity is created in Google Draw. For each chapter exercise the instructor creates specific instructions, and a base diagram. The amount of information in the base diagram can range from the bare bones of two axes with scales to one that

includes curves setting up the problem to be analyzed. The student completes the diagram and provides a brief explanation of their analysis.

The diagrams are prepared in Google Draw and stored in a folder in Google Drive. The folder is shared with the class members. The students download the session template and using Google Draw complete the diagram and write a short answer.

HOW THE POSTER SESSION WILL EXPLAIN THE ACTIVITY

For our poster session we will prepare screen captures that walk the instructor through the process of creating the template in Google Draw, the base diagram, and a folder to share in Google Drive. We will show how to create a brief instructional video explaining to students how to complete the activity. Other instructional materials we will explain are how a group wiki can be created in the BlackBoard LMS, or the free tool Wikispaces. And we will show how to create a poll, using the free Poll Everywhere tool, for students to critique representative graphs.

