

Assignment 2
AGEC 3303

A. Watch the following clip and answer then answer the questions below:

<https://www.youtube.com/watch?v=087JTrlRUfk>

1. What fundamental problem (s) can food irradiation address?
2. Is food irradiation safe? What entities support its use?
3. Is food irradiation used widely today? Why not?
4. Why is microwaveable food so widely accepted but irradiated food not?
5. What demand state best applies to the case of irradiated meat and poultry today?

B. Using the following demand equation answer the questions below:

$$Q_1 = 20 \text{ Pop} - 4 P_1 - 2 P_2 - 0.01M$$

1. Is good 1 a normal good or an inferior good? How can you tell?
2. Is good 2 a substitute or a complement to good 1? How can you tell?
3. Does the demand for good 1 conform to the law of demand? How can you tell?
4. What variables shift the demand relationship?

C. Calculate and graph consumer surplus given the following information:

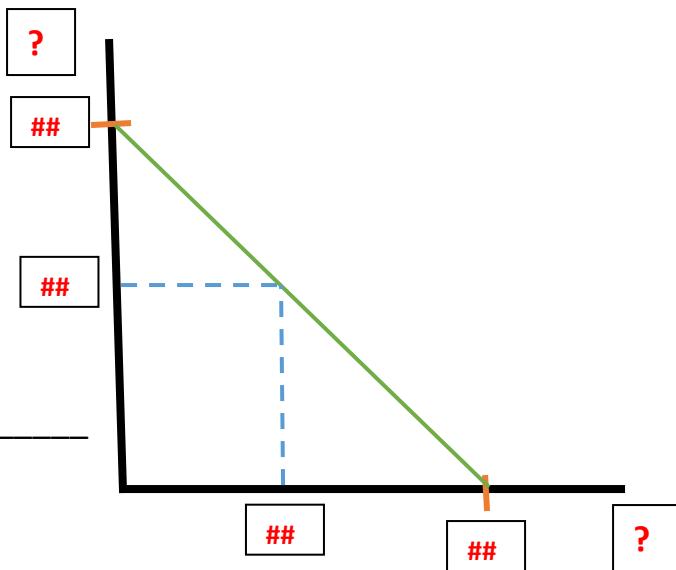
$$Q = 20 \text{ Pop} - 3P_1 + 2P_2 + .01 M$$

$$P = 40$$

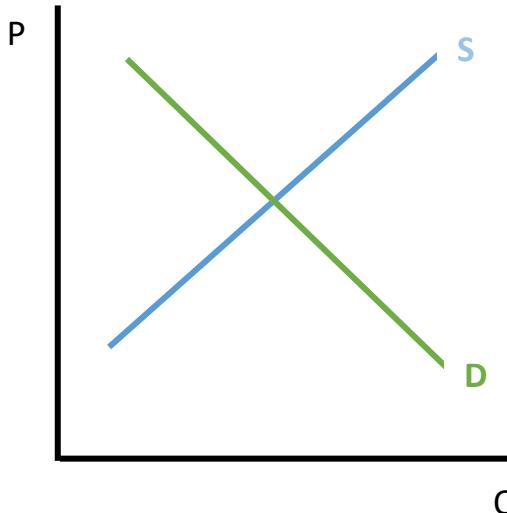
Be sure the label axis titles, axis intercepts as well as shade/identify the area of consumer surplus.

1. Consumer Surplus = _____

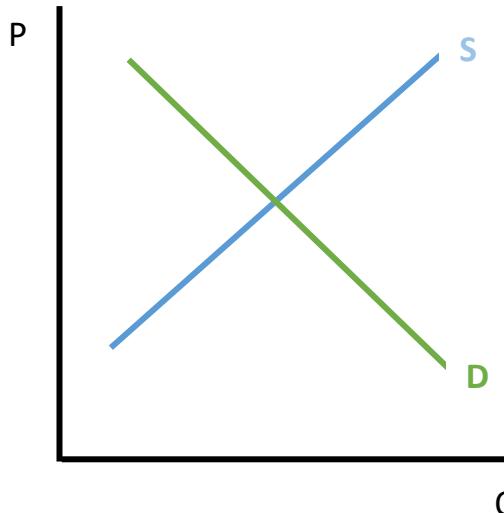
Show all math in space below



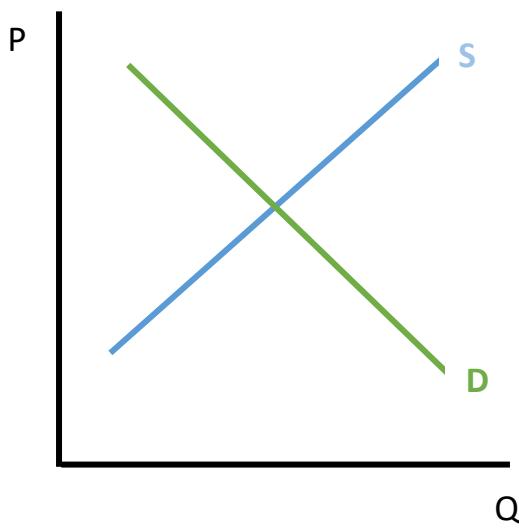
D. Identify the impact the following changes will have on the demand or supply curve. Illustrate this impact by drawing the 'new' curve and provide an arrow to indicate the direction.



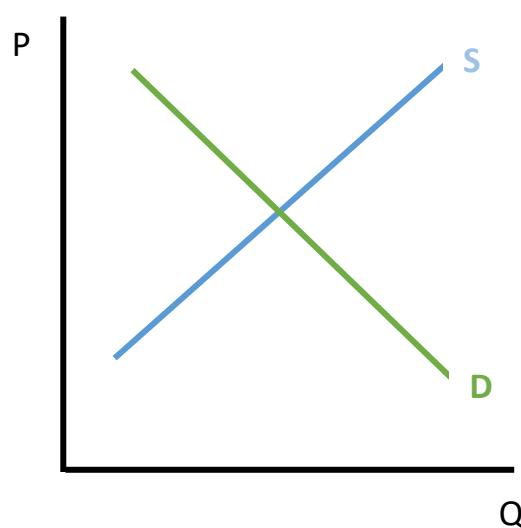
1. Incomes have gone up.



2. The input price for fertilizer has decreased.



3. The price of a substitute increased.



4. The own price of our good has decreased.

- E. Utilize the following links to provide background on operating a grape vineyard. Additionally utilize Cornell's document (Table 11) to answer the questions below.

<https://www.youtube.com/watch?v=gqAEehcxuz8>

https://www.youtube.com/watch?v=C_0SQiFOaI8

<https://www.youtube.com/watch?v=4MsUm-bMkIY>

<http://ageconsearch.umn.edu/bitstream/121629/2/Cornell-Dyson-eb1103.pdf>

1. How has the author handled the issue of "economic" versus "accounting" costs. Can you provide some examples of costs included in the budget that wouldn't necessarily show up on financial statements?
2. Why did the author classify some costs as fixed and others as variable costs? Is there any feature that all fixed costs have in common? What do all variable costs have in common?
3. How did the author compute the break - even price? Compute the average fixed costs (\$/ton) and average variable costs (\$/ton) assuming the yield targets reported in the top row of Table 11?
4. Given the values reported in Table 11, would you expect to see lots of new vineyards being established? Why or why not?
5. Assuming that variable costs and yield targets reported in Table 11 are typical for vineyards that have already been established, do you expect existing vineyards to shut down in the short run? Why or why not?

F. Calculate the missing variables and show your work in the space below.

Quantity Produced	650
Total Cost	3500
Total Fixed Costs	
Total Variable Costs	1500
Break Even Price (ATC)	
Shut-down Price (AVC)	

G. Given that $Q_1 = -14 + 3P_1 - .5P_2 - 1.1W$ and $P_1 = 76$, $P_2 = 8$ and $W = 7$:

1. Is good 2 a competing or joint product for good 1?
2. What is the direct supply schedule given these data?
3. What is the inverse supply schedule given these data?
4. What is producer surplus at the above data point? Show your work.

Be sure the label axis titles, axis intercepts as well as shade/identify the area of producer surplus.

