

Economics 1104C

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Midterm 1

Answer Key

Part 1: Multiple Choice

(1.5 points
each - 21
total)

- | | |
|------|-------|
| 1) B | 9) D |
| 2) A | 10) C |
| 3) D | 11) C |
| 4) B | 12) A |
| 5) A | 13) D |
| 6) C | 14) D |
| 7) C | |
| 8) D | |

Part 2 - Short Answer

2

1) 3 points

1 Susan should still pick the apples.
This is because Susan thinks at the margin, ~~not the p~~
Since the pollination costs are sunk, they do not factor into her decision.

1 If Susan does not pick the apples her total ~~loss~~ loss for the year will be \$300.
If Susan picks the apples, she will incur an additional cost of \$100, but earn \$250, for a total loss of \$150.

1 Susan is better off if she picks the apples. Her loss will be less.

OP #
Susan only compares the cost of picking the apples to the revenue she gets \$250 in revenue for a cost of \$100.

3

2) 6 points

$$\text{Elast} = \frac{\% \Delta Q}{\% \Delta P} \quad 1$$

$$\% \Delta P = \frac{3-5}{4} \times 100 = 50\% \quad 1$$

$$\% \Delta Q = \frac{300-100}{200} \times 100 = 100\% \quad 1$$

$$\frac{\% \Delta Q}{\% \Delta P} = \frac{100\%}{50\%} = 2 \quad 1$$

1 Elasticity is greater than 1, so the ~~hot dog~~ demand for hot dogs is elastic

1 As hot dogs are elastic, lowering the price will increase revenue, so the vendor should keep the price at 3 dollars.

or			
≠			
at 5 dollars	at 3 dollars		Revenue is
TR = 5 x 100	TR = 3 x 300		higher when
TR = 500	TR = 900		price is \$3

3) 3 points

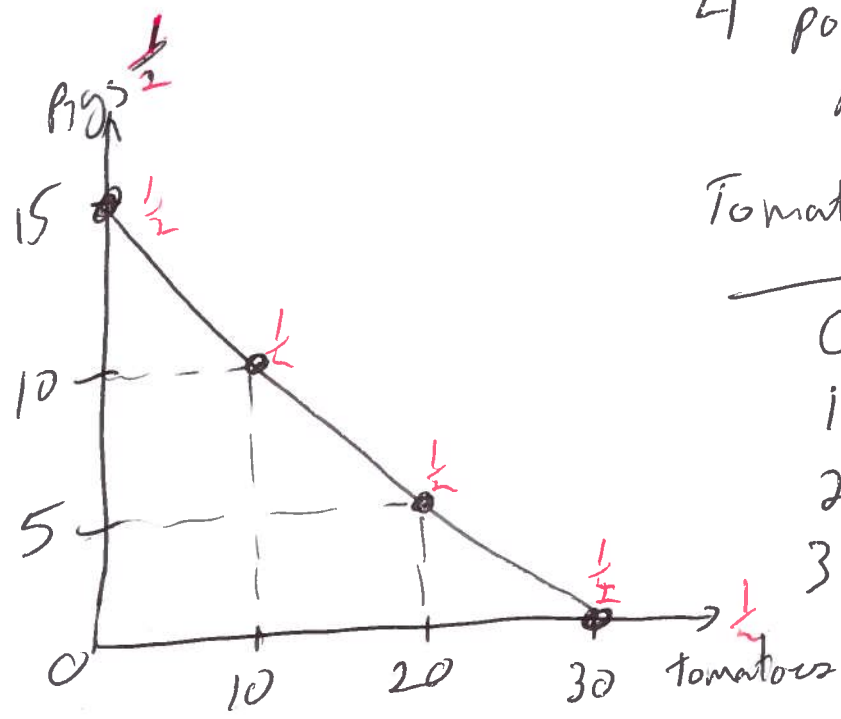
(4)

Smoking causes an externality.

[When someone chooses to smoke, they expose those around them to smoke, which has negative health impacts and is ~~undesirable~~ undesirable.] [Smokers do not take the costs imposed on others when they decide to smoke. A ban on smoking is an attempt to address the externality.]

4) 8 points

A) 3 points



4 possible Production Points

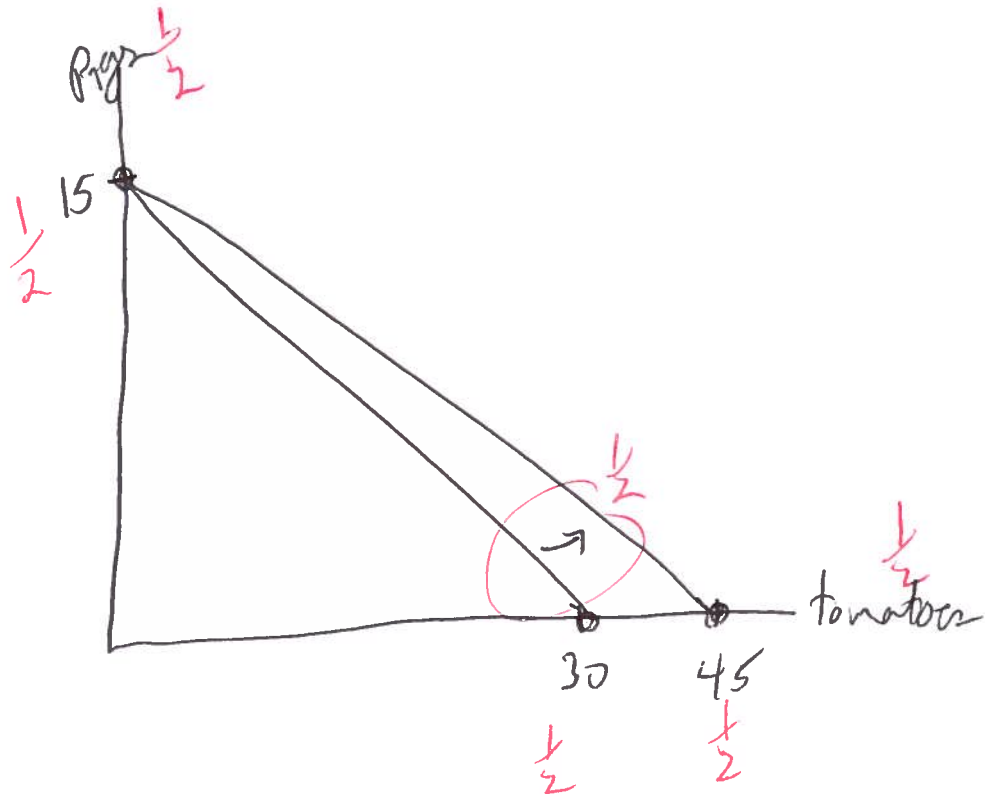
Tomatoes	Pigs
0	15
10	10
20	5
30	0

B) 5 points

1 This will cause the PPF line to swivel out on the tomato axis.

1 This means that the opportunity cost of pigs will go up. Before 1 pig costs 2 baskets of tomatoes, and now one pig costs 3.

6



Part 3 - Longer Question

⑦

1) A) Equilibrium when $Q_d = Q_s$ |

3 points

$$50 - 3P = 10 + 2P$$

$$40 = 5P$$

$$P^* = 8$$

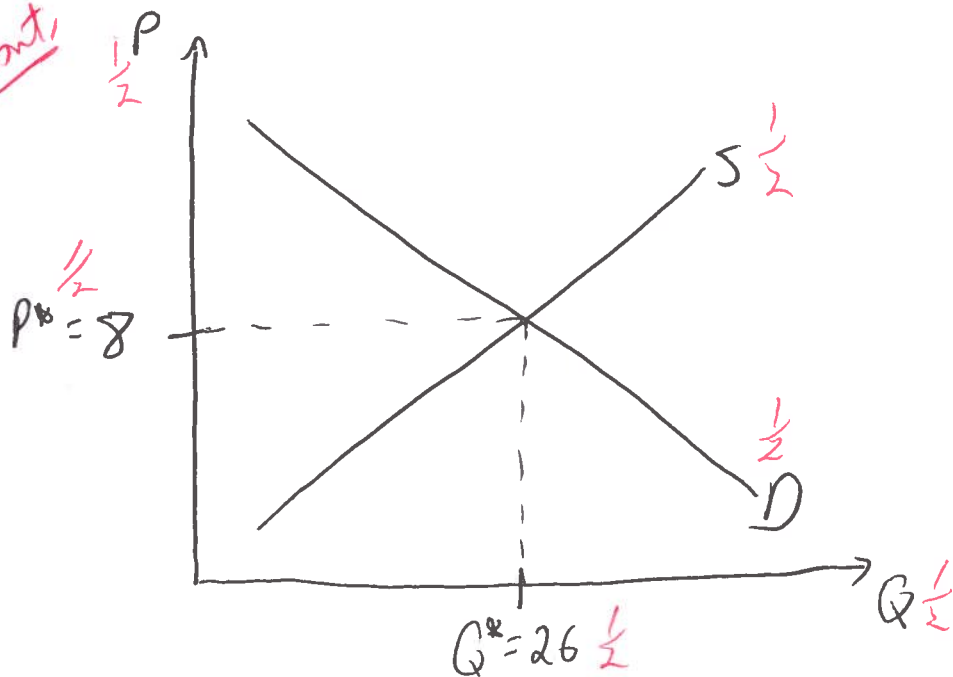
$$Q_d = 50 - 3(8)$$

$$Q_d = 50 - 24$$

$$Q^* = 26$$

B)

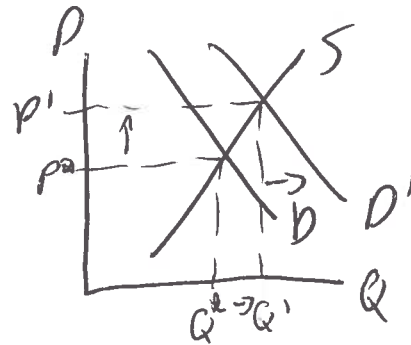
3 points



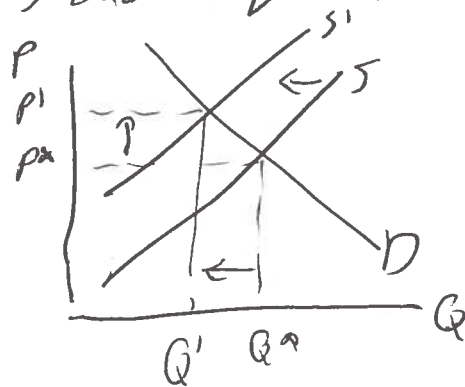
c) 3 points

8

If the summer is very hot, I would expect the demand for ice cream to increase. This will cause the demand curve to shift right. This will cause the equilibrium price and quantity of ice cream to both increase.



d) 3 points [As sugar is an input in the production of ice cream, an increase in its cost will make ice cream production less profitable at all prices. This will shift the supply curve to the left, and decrease supply. Equilibrium price will increase, and equilibrium quantity will decrease.



E) 3 points

9

- $\frac{1}{2}$ - The increase in demand causes an increase in Price and an increase in Quantity
- $\frac{1}{2}$ - The decrease in supply causes an increase in price and a decrease in Quantity
- 1 - Both effects cause an increase price, so price increase unambiguously
- 1 - Both have a competing impact on quantity and the overall impact on quantity is ambiguous

F) 2 points [Yes - based on this information, we can say that the overall impact on quantity will be an increase.] [A small decrease in supply will cause a small decrease in Quantity, and a large increase in demand will cause a large increase in quantity. The increase will outweigh the decrease, for an overall increase in quantity.]

Bonus

2 points

(10)

- 1) Jurisdictions that ban plastic bags have an increase in hospital admissions and deaths due to bacterial infections
- 2) Queen Elsa's magic caused a large increase in ice supply and/or a large decrease in the demand for ice, causing a decrease in price