Homework 2 – KEY

Average: 82.29 + 0pts GI bonus

Due on 3/9/2024, by 23:00

The tasks in this assignment were designed for the average student to solve independently after mastering the material. The answers provided here are written in an instructional manner to help you understand the problem-solving process for each task. If you continue to struggle with a task after reviewing this key, the difficulty may stem not from the task itself, but from having missed or overlooked some parts of the required material.

1. The demand for ankle socks has decreased. Which of the following could be the reason?

  22% A. The price of ankle socks has increased. *[Does not affect the demand]*

  75% **B. Only boomers still wear ankle socks. *[Declining customer base]***

  C. The price of cotton has decreased. *[Does not affect the demand]*

  D. Labor costs have increased. *[Does not affect the demand]*

2. Which of the following is most likely to shift the demand for PlayStation to the left?

  A. A decrease in the price of games for PlayStation. *[The console and its games are complements, so this would cause PS's demand to increase and the curve to shift right]*

  90% **B. A decrease in the price of Xbox. *[True, since Xbox is a substitute to PS consoles]***

  C. An increase in consumer income. *[This would cause PS's demand to increase because the PlayStation is a normal good, thus the curve would shift to the right]*

  D. All of the above.

3. Which of the following is more likely if the government bans smoking completely?

  A. The quantity demanded for cigarette lighters will increase.

  18% B. The quantity demanded for cigarette lighters will decrease.

  C. The demand for cigarette lighters will increase.

  81% **D. The demand for cigarette lighters will decrease.**

  [The prohibition of smoking will decrease the need for lighters no matter what the price of lighters is. That is, the prohibition decreases the demand for lighters. B does not necessarily entail a change in demand for lighters as quantity demanded can change even without demand changing]

4. Demand for cocoa is $p = 10{,}000 - 0.5q$. What is the elasticity of demand for cocoa when $q = 4{,}000$?

  A. Around -0.25.

  B. Around -0.5.

  C. Around -1.

  D. Around -2.

  87% **E. Around -4.**

  F. Around -200.

  [We can use the formula for elasticity from practice set 2

  $$\varepsilon_d = 1 - \frac{a/b}{q} = 1 - \frac{10{,}000}{0.5 \cdot 4{,}000} = 1 - 5 = -4]$$

5. ✓ When milk is measured in liters, its price elasticity of demand is -1.5. Given that 1 liter is approximately equivalent to 0.26 gallons, what will the price elasticity of demand for milk be when we measure it in gallons?

75% A. -1.5.
B. -1.5/0.26.
C. -1.5x0.26.
15% D. We cannot tell with the information given.

[The units of quantity (or price) will not make a difference to the elasticity because elasticity is a pure number with no units. When we divide ΔQ/Q the units of quantity cancel out]

6. Which of the following is true?

72% A. **Demand becomes more inelastic as quantity increases.** *[See PS2, task 7]*
17% B. Demand becomes less inelastic as quantity increases.
11% C. The elasticity of demand remains constant as quantity increases.

7. ✓ Which of the following products would you expect to have the most vertical market demand?

A. Beer.
10% B. Tobacco.
C. Marijuana.
83% D. **Heroin.**

[The more addictive a product is, the more inelastic its demand]

8. ✓ Which of the following goods is most likely to increase government revenue from taxation if an excise tax is imposed on that good?

A. Wine.
93% B. **Cigarettes.**
C. Pizza.
D. Apparel.

[Because (as explained in tutorial video 2) the demand of cigarettes is known to be price inelastic]

Q_A	25	50	100	140
P_B	$60	$80	$120	$160

Table 2.1: *The price of good B and the corresponding quantity demanded of good A.*

9. ✓ According to table 2.1, which of the following is most likely to be true for goods A and B?

A. They are complements.
90% B. **They are substitutes.**
C. They are normal. *[We need information for income changes for this]*
D. They are inferior. *[We need information for income changes for this]*

[As good B becomes more expensive, people buy more of good A; thus, most likely the goods are substitutes]

10. Yesterday, I had a veggie burger at Honbo. Which of the following could its opportunity cost be?

A. The price of a non-vegetarian burger at Honbo. *[This is the explicit cost of an alternative]*
19% B. The price of the vegetarian burger at Prive. *[This is the explicit cost of another alternative]*
C. My utility from eating my veggie burger. *[This is the benefit I received]*
D. The green salad which came with my burger. *[This is another benefit I received]*
71% E. **None of the above.**

[OC is the benefit forgone by not choosing the next best alternative]