

Homework 4 – KEY

Average: 91.95 + Opts GI bonus

Due on 10/2/2026, 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.

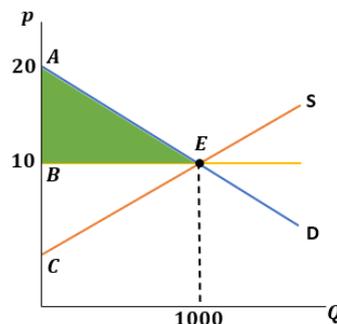
1. ✓ Which of the following is true for a profit maximizing monopolist who faces a downward sloping market demand?

- A. Price is less than the marginal revenue. *[Price is on the demand curve, which is always above MR]*
- B. Price is equal to the marginal revenue.
- C. Price is equal to the marginal cost. *[Only in PC]*
- 97%D. **Price exceeds marginal cost.** *[Optimal quantity is when $MC = MR$ and MR is always below demand which yields the price]*

2. ✓ The market demand curve for a good is linear with a vertical intercept at \$20. Find the consumer surplus when the price is \$10 and quantity demanded is 1,000 units.

- A. Around 500.
- B. Around 1,000.
- 96%C. **Around 5,000.**
- D. Around 10,000.

[It will be the triangle ABE. The height of the triangle is $20 - 10 = 10$ and base is 1,000, so the area is $10 \cdot 1,000 \cdot 0.5 = 5,000$]



3. ✓ Which of the following best describes the producer surplus in a Perfectly Competitive market?

- A. The area between the market demand and the equilibrium price.
- 97%B. **The area between the market supply and the equilibrium price.**
- C. The area below the market supply.
- D. The area above the market price.

[Producer surplus is the difference between how much producers receive and how much they are willing to sell, represented by the market price and the supply curve, respectively]

- 4✓ Suppose that the production of a new iPhone has AVC constant at \$200. How much will the profit maximizing price be if the elasticity of demand for the iPhone is -1.2?
- A. Around \$600.
 - B. Around \$800.
 - C. Around \$1,000.
 - 95%D. Around \$1,200.**
 - E. Around \$1,400.

[If AVC is constant at \$200, $MC = 200$. By using the markup rule: $p = MC \cdot [1 + \frac{-1}{1+\epsilon_d}]$ or $p = 200 \cdot [1 + \frac{-1}{1-1.2}]$ or $p = 200 \cdot [1 + 5]$ or $p = \$1,200$]

- 5✓ Which of the following is an example of rent-seeking?
- A. The market power Changi airport has in SE Asia. *[Changi's market power comes from efficiency, investment and service quality]*
 - 78%B. The fee Singapore paid to Taylor Swift to hold all her 2024 SE Asia concerts in Singapore. *[Singapore paid for exclusive benefits without creating additional economic value]***
 - C. The high price of a specialized drug against cancer. *[The high price reflects research costs, innovation, and value creation]*
 - 18%D. All of the above.**

- 6✓ Which of the following is most likely to be the reason why governments avoid imposing sales-taxes on pharmaceutical products with inelastic demand?
- A. The tax would decrease the monopolist's profits.
 - B. The tax would increase the monopolist's profits.
 - 89%C. The tax would create a DWL.**
 - D. The tax would not yield revenue for the state.
- [Due to the inelasticity of demand, the tax will increase the price by a large amount and will decrease the quantity demanded, leading to an increase of the DWL]*

Q_D	0	1	2	3	4	5	6
P	50	45	40	35	30	26	23

Table 4.1: The demand schedule for a monopolist

- 7✓ According to table 4.1, what is the profit maximizing quantity for the monopolist if $MC = 10$?
- A. Zero.
 - B. 1 unit.
 - C. 2 units.
 - D. 3 units.
 - 12%E. 4 units.**
 - 84%F. 5 units.**
 - G. 6 units.

[We should look at which quantity $MR = 10$. From the table below we can observe that this happens at the 5th unit:]

Q_D	0	1	2	3	4	5	6
P	50	45	40	35	30	26	23
R	0	45	80	105	120	130	138
MR	-	45	35	25	15	10	8

8✓ According to table 4.1, how much will the monopolist's profit be if $MC = 10$ and $FC = 40$?

- A. Zero.
- B. Around 10.
- C. Around 20.
- D. Around 30.

95%**E. Around 40.**

- F. Around 50.

[Revenue is $5 \cdot 26 = 130$ and cost is $10 \cdot 5 + 40 = 90$, so profit will be $130 - 90 = 40$]

9✓ Which of the following problems would a human organ market most likely resolve?

- A. The huge DWL. *[An organized market could indeed decrease the DWL]*

16%**B. The low supply of human organs. [An organized market would incentivize more people to sell some of their organs, thus increasing the supply]**

81%**C. Both A and B.**

- D. None of the above.

10✓ Which of the following could increase the market power for a brand?

- A. Product differentiation.
- B. Advertisement.
- C. Positive reviews.

96%**D. All of the above.**

- E. None of the above.

[These are common strategies firms use to reduce consumers' willingness to switch to competitors]