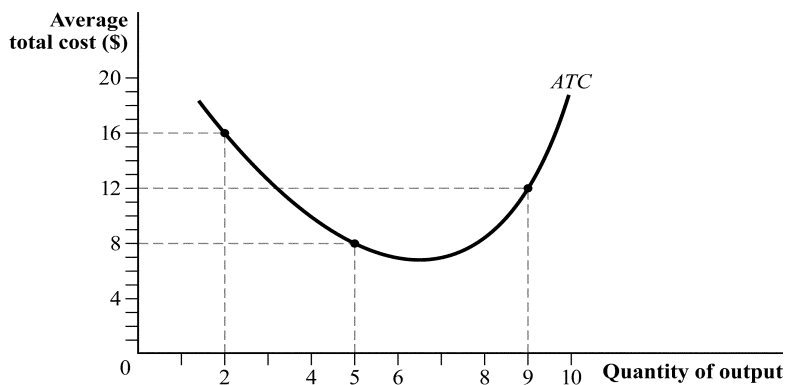


## Quiz #5, November 5, 2020

1. A firm is producing 50 units of output at a total cost of \$1,600, with a per-unit variable cost of \$12. What is the firm's average fixed cost?
  - A) \$12
  - B) \$4
  - C) \$20
  - D) \$28

Use the following to answer question 2.

**Figure 7.6**



2. (Figure 7.6) Which of the following statements is (are) TRUE?
  - I. The average cost at 2 units of output is 8.
  - II. The marginal cost between 2 and 5 units of output is constant.
  - III. The average cost at 9 units of output is 12.
  - A) I and II
  - B) II
  - C) III
  - D) I

Use the following to answer question 3.

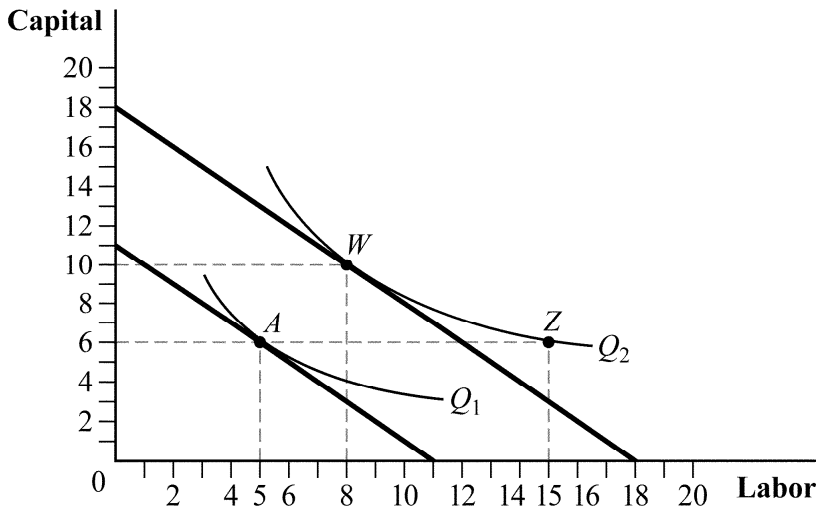
**Table 7.2**

Labor (detailers per day)	Detailed cars (cars cleaned per day)
0	0
1	1
3	2
6	3

3. (Table 7.2) Carl's Detailing is a small business that travels to people's homes to meticulously clean their high-end sports cars. Carl hires detailers (labor) at a wage of \$80 per day per worker. A van that is used to carry cleaning supplies to clients' homes has a fixed cost of \$20 per day. The table shows the relationship between the number of cars cleaned and the number of detailers. The marginal cost of cleaning the first car is \_\_\_\_\_, and the marginal cost of cleaning the third car is \_\_\_\_\_.
- A) \$80; \$480  
B) \$80; \$240  
C) \$100; \$260  
D) \$100; \$300
4. Suppose a firm's total cost and marginal cost functions are given by  $TC = 50 + Q + 2Q^2$  and  $MC = 1 + 4Q$ , respectively. What is the output level that minimizes average total cost?
- A) 5  
B) 3  
C) 4.45  
D) 6

Use the following to answer question 5.

**Figure 7.9**

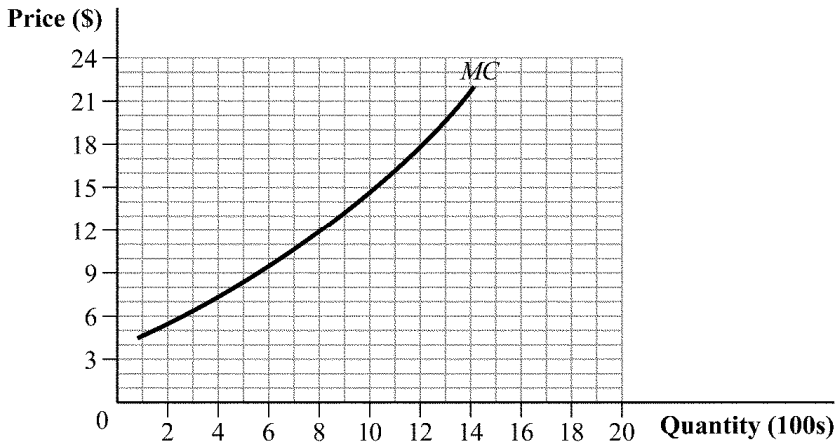


5. (Figure 7.9) Suppose the firm is producing at point *A*. If the firm wants to produce more output, it will:
- A) not be able to because capital is fixed.
  - B) move to point *W* in the short run and point *Z* in the long run.
  - C) move to a point between *W* and *Z* in the short run.
  - D) move to point *Z* in the short run and point *W* in the long run.
6. Which of the following characteristics relate(s) to perfect competition?
- I. An industry is dominated by several large firms.
  - II. Consumers cannot distinguish one firm's product from another.
  - III. New firms can easily enter the industry.
- A) I and II
  - B) II and III
  - C) II
  - D) III

7. To maximize profits, a firm should produce where:
- A)  $MR = MC$ .
  - B)  $TR/Q = TC/Q$ .
  - C)  $P = AVC$ .
  - D)  $ATC < P < AVC$ .

Use the following to answer question 8.

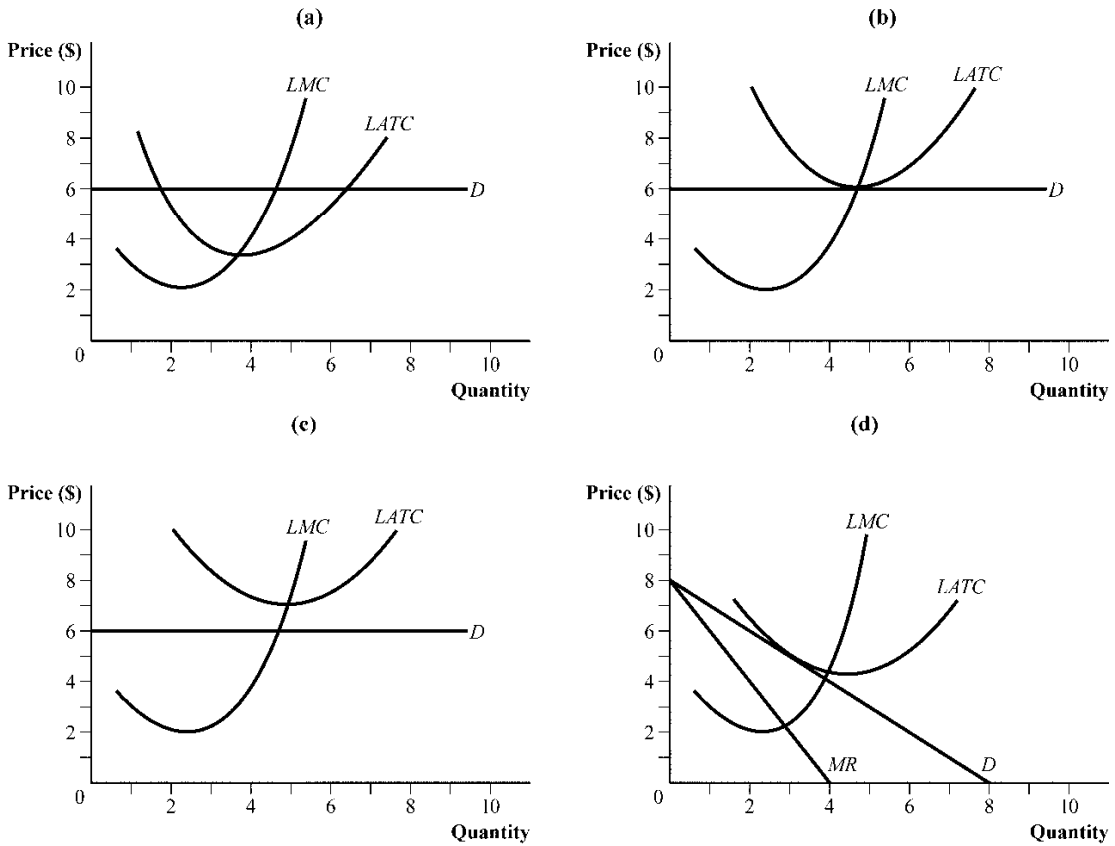
**Figure 8.5**



8. (Figure 8.5) The graph shows a firm's marginal cost curve. This firm operates in a perfectly competitive industry with market demand and supply curves given by  $Q^d = 50 - 8P$  and  $Q^s = -20 + 2P$ , where  $Q$  is measured in millions of units. Based on the figure, how many units of output will the firm produce at the equilibrium price?
- A) 1,100
  - B) 800
  - C) 1,200
  - D) 400

Use the following to answer question 9.

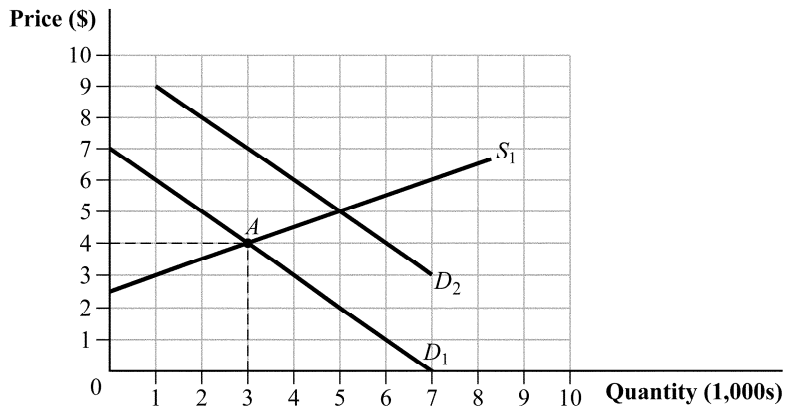
**Figure 8.16**



9. (Figure 8.16) Which panel shows a representative firm (operating in a perfectly competitive industry) in a long-run equilibrium?
- A) panel a
  - B) panel b
  - C) panel c
  - D) panel d

Use the following to answer question 10.

**Figure 8.17**



10. (Figure 8.17) Initially, the constant-cost industry was in long-run equilibrium at point  $A$  when the demand for the good increased to  $D_2$ . How much output will be produced in the long run as a result of the demand increase?
- A) 3,000
  - B) 5,000
  - C) 6,000
  - D) 7,000

**Answer Key - F20-5**

1. C
2. C
3. B
4. A
5. D
6. B
7. A
8. D
9. B
10. C