

2.16.16

1 & 2 refer to the following information.

$$S(P) = \frac{1}{2}P + 40$$

$$D(P) = 220 - P$$

$P = \text{price \$}$

$$\begin{aligned} 220 - P &= \frac{1}{2}P + 40 \\ -40 + P &+ P - 40 \\ 180 &= 1.5P \\ \frac{180}{1.5} &= \frac{1.5P}{1.5} \quad 120 \end{aligned}$$

1) The quantity of the product supplied and the quantity of the product demanded in an economic market are functions of the price of the product. The functions above are the estimated supply and demand functions for a product. The function $S(P)$ gives the quantity of the product supplied to the market with P dollars, and the function $D(P)$ gives the quantity of the product demanded by the market with P dollars.

1) The quantity of the product supplied will change if the price of the product is increased by \$10?

P increased by 10

- Quantity supplied will decrease by 5 units.
- Quantity supplied will increase by 5 units.
- Quantity supplied will increase by 10 units.
- Quantity supplied will increase by 50 units.

2) At what price will the quantity of the product supplied to the market equal the quantity of the product demanded by the market?

- A) \$90
- B) \$120
- C) \$133
- D) \$140