Review...

Tuesday, July 5

QUESTION 1 (aggregate demand)

Suppose that, in some market, there are 5 potential buyers, each with the same marginal benefit function, $MB_i = 6 - Q_i$, and there are 5 potential sellers, each with the same marginal cost function, $MC_i = 2 + Q_i$.

Which of the following gives the correct market demand function (the combined demand of all 5 buyers)?

A) $Q_D = 90 - 7P$
B) $Q_D = 10 - P$
C) $Q_D = 30 - 5P$
D) $Q_D = 40 - 4P$
E) $Q_D = 20 - 8P$

answer to question 1

Suppose that, in some market, there are 5 potential buyers, each with the same marginal benefit function, $MB_i = 6 - Q_i$, and there are 5 potential sellers, each with the same marginal cost function, $MC_i = 2 + Q_i$.

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C) $Q_D = 30 - 5P$
D) $Q_D = 40 - 4P$
E) $Q_D = 20 - 8P$

QUESTION 2 (aggregate supply)

Suppose that, in some market, there are 5 potential buyers, each with the same marginal benefit function, $MB_i = 6 - Q_i$, and there are 5 potential sellers, each with the same marginal cost function, $MC_i = 2 + Q_i$.

Which of the following gives the correct market supply function (the combined supply of all 5 sellers)?

A) $Q_S = 4P - 10$
B) $Q_S = 3P - 2$
C) $Q_S = 5P - Q$
D) $Q_S = 5P - 10$
E) $Q_S = 4P + 10$

answer to question 2

Suppose that, in some market, there are 5 potential buyers, each with the same marginal benefit function, $MB_i = 6 - Q_i$, and there are 5 potential sellers, each with the same marginal cost function, $MC_i = 2 + Q_i$.

Which of the following gives the correct market supply function (the combined demand of all 5 sellers)?

A) $Q_S = 4P - 10$
B) $Q_S = 3P - 2$
C) $Q_S = 5P - Q$
D) $Q_S = 5P - 10$
E) $Q_S = 4P + 10$

QUESTION 3 (equilibrium price)

5 buyers, each with $MB_i = 6 - Q_i$
5 sellers, each with $MC_i = 2 + Q_i$

$Q_D = 30 - 5P$
$Q_S = 5P - 10$

What is the price of the good in market equilibrium?

A) 4
B) 3
C) 5
D) 7
E) 1

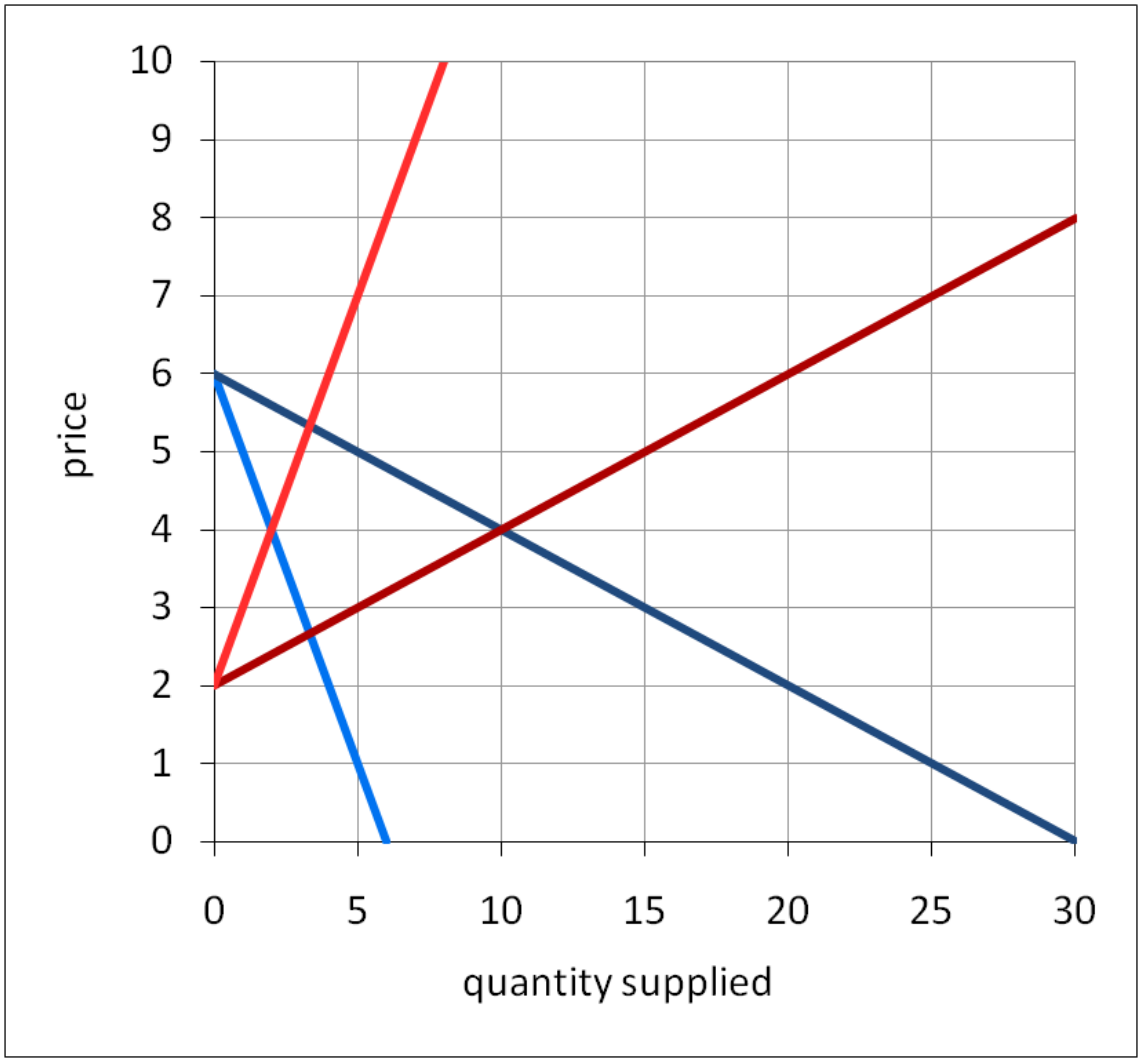
answer to question 3

5 buyers, each with $MB_i = 6 - Q_i$
5 sellers, each with $MC_i = 2 + Q_i$

$Q_D = 30 - 5P$
$Q_S = 5P - 10$

P = 4

A) 4
B) 3
C) 5
D) 7
E) 1



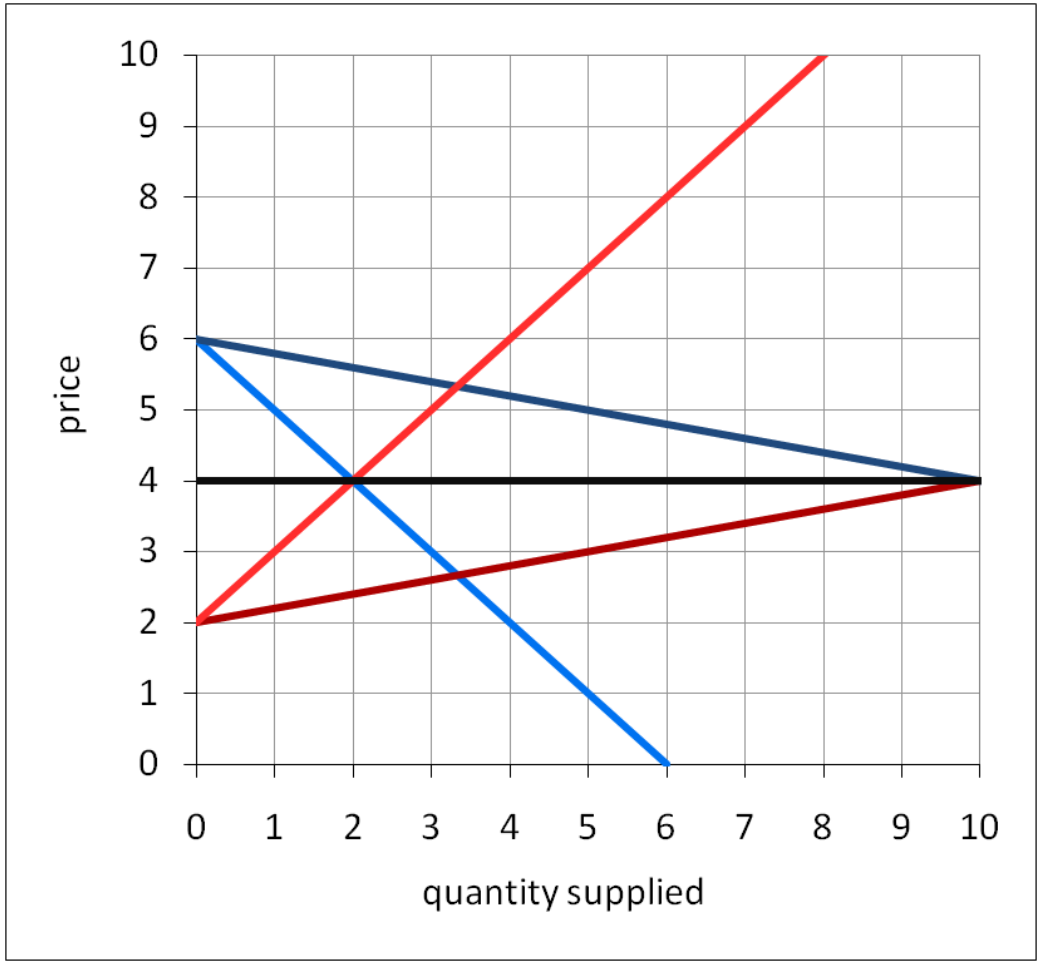
QUESTION 4 (consumer surplus)

5 buyers, each with $MB_i = 6 - Q_i$
5 sellers, each with $MC_i = 2 + Q_i$

$Q_D = 30 - 5P$
$Q_S = 5P - 10$

When P = 4, how much surplus does *each* consumer get?

A) 1
B) 3
C) 4
D) 5
E) 2



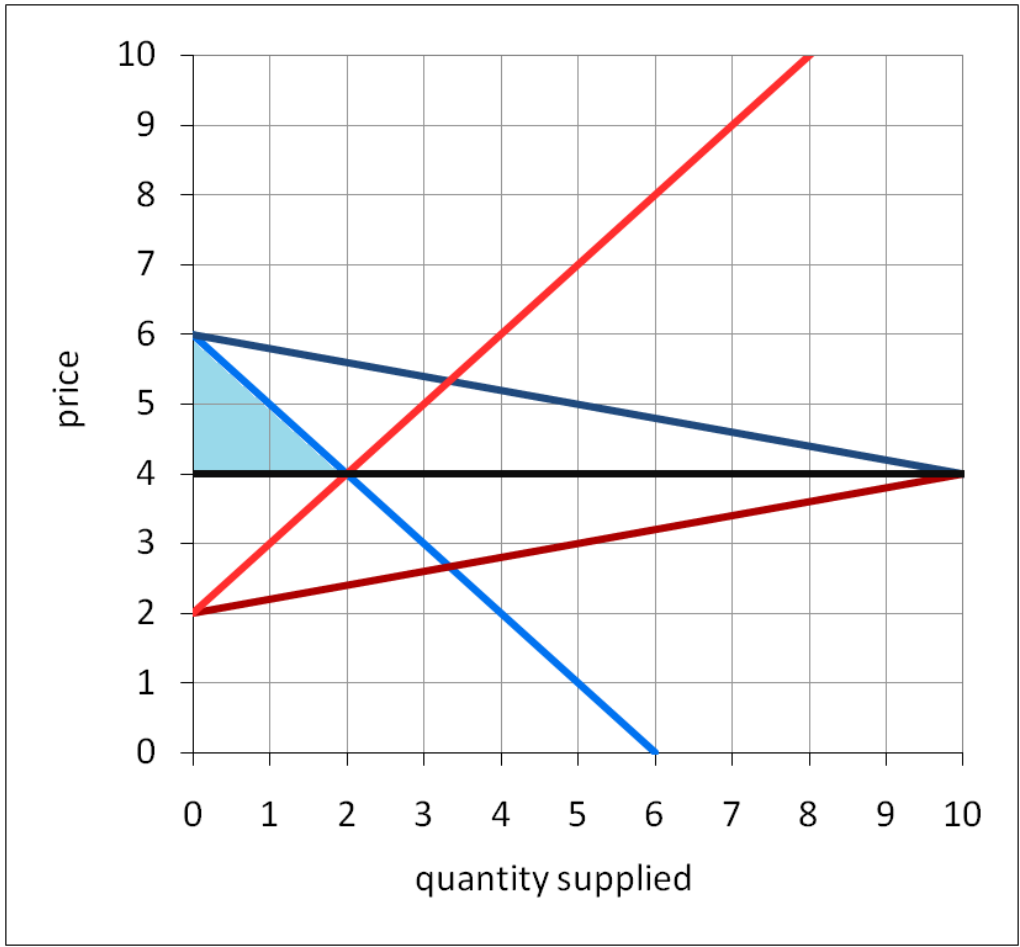
answer to question 4

5 buyers, each with $MB_i = 6 - Q_i$
5 sellers, each with $MC_i = 2 + Q_i$

$Q_D = 30 - 5P$
$Q_S = 5P - 10$

$CS_i = (.5)(2)(2) = 2$

A) 1
B) 3
C) 4
D) 5
E) 2



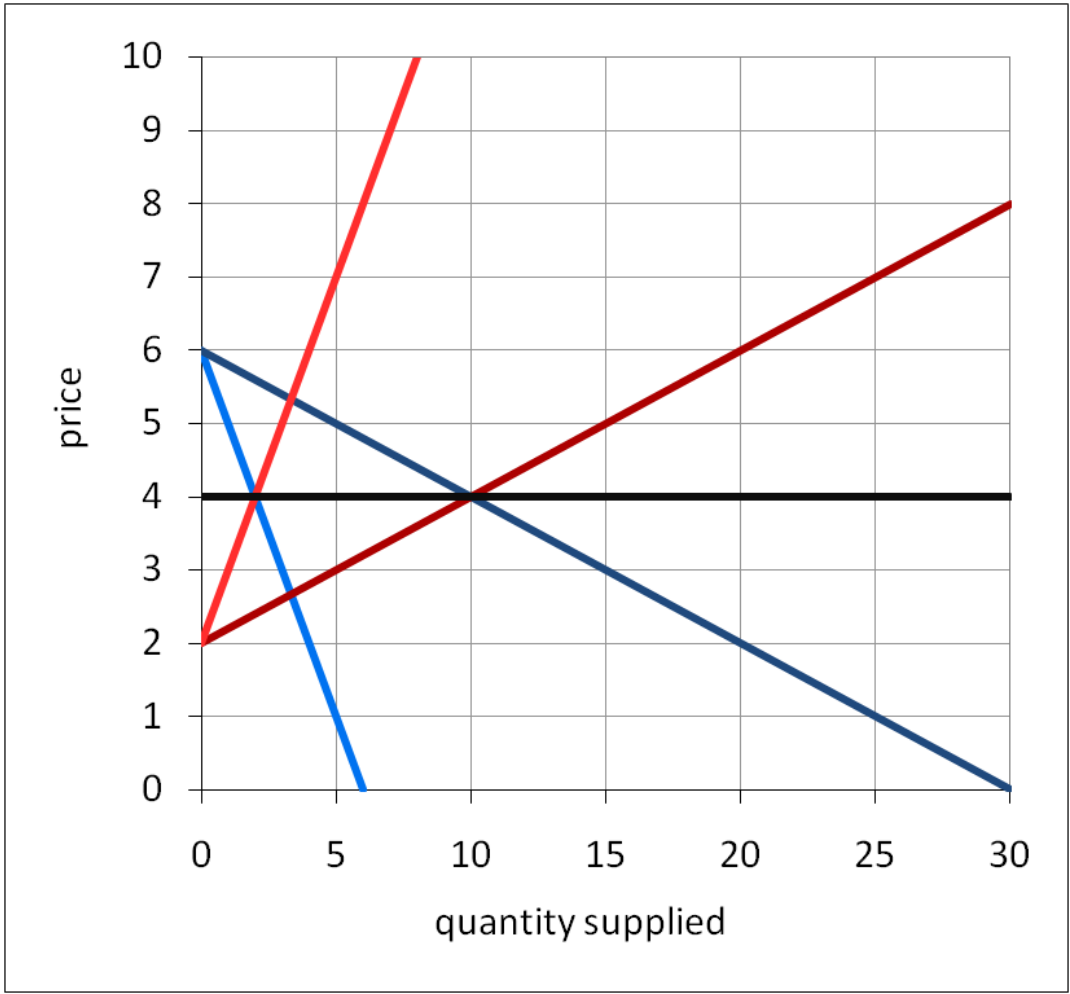
QUESTION 5 (consumer surplus)

5 buyers, each with $MB_i = 6 - Q_i$
5 sellers, each with $MC_i = 2 + Q_i$

$Q_D = 30 - 5P$
$Q_S = 5P - 10$

When P = 4, how much consumer surplus is there in total?

A) 9
B) 18
C) 14
D) 10
E) 12



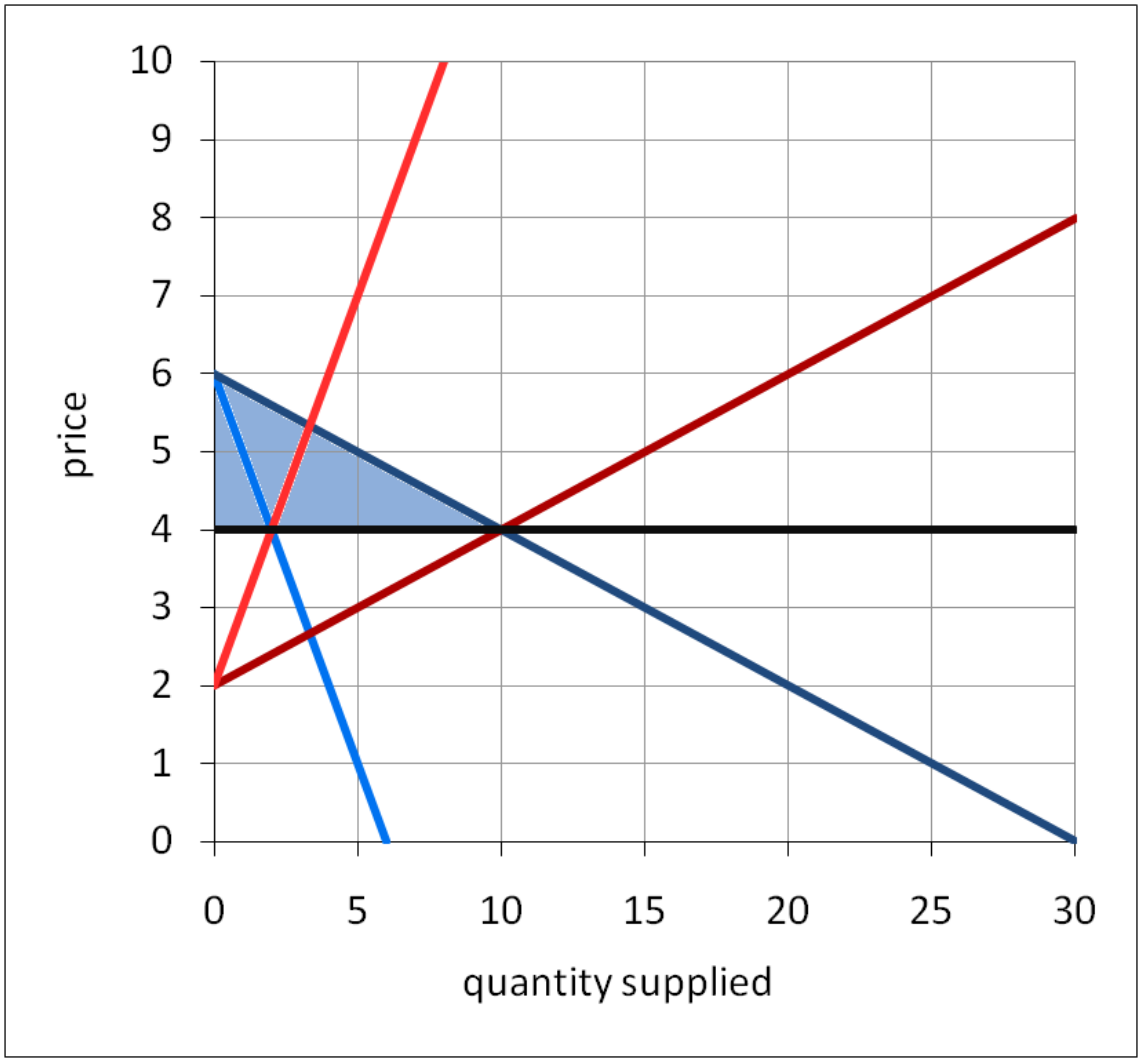
answer to question 5

5 buyers, each with $MB_i = 6 - Q_i$
5 sellers, each with $MC_i = 2 + Q_i$

$Q_D = 30 - 5P$
$Q_S = 5P - 10$

CS = (.5)(10)(2) = 10

A) 9
B) 18
C) 14
D) 10
E) 12



QUESTION 6 (cost-benefit analysis)

Building a skate park in a currently empty area will cost $5000 in construction and such.

There are 14 skaters in the neighborhood, and each one would be willing to pay a maximum of $500 to have the skate park built.

A private developer is willing to pay $X for the land. (This is the only other offer around.)

So, the skate park should be built as long as…

A) X is equal to 5000
B) X is greater than 5000
C) X is less than 5000
D) X is greater than 2000
E) X is less than 2000

answer to question 6

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So, the skate park should be built as long as...

A) X is equal to 5000
B) X is greater than 5000
C) X is less than 5000
D) X is greater than 2000
E) X is less than 2000

QUESTION 7 (quantity demanded, continuous)

MB = 60 – 2Q

If P = 10, what is the quantity demanded?

A) 25

B) 30

C) 40

D) 50

E) 60

answer to question 7

MB = 60 – 2Q

If P = 10, what is the quantity demanded?

60 – 2Q = 10

2Q = 50

Q = 25

A) 25

B) 30

C) 40

D) 50

E) 60

QUESTION 8 (demand curve, continuous)

MB = 60 – 2Q

Which gives the correct equation for the demand curve?

A) Q = 30 – P/2

B) Q = 60 – P/2

C) Q = P/2 – 60

D) Q = P/2 – 30

E) Q = 60 + P/2

answer to question 8

MB = 60 – 2Q

Which gives the correct equation for the demand curve?

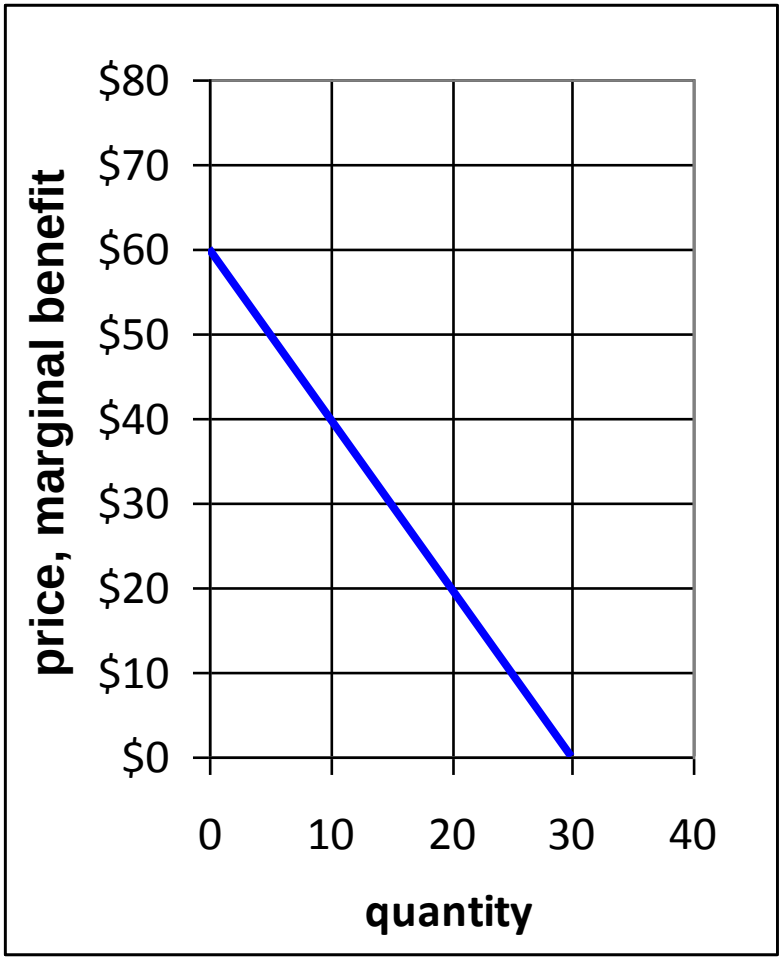
A) Q = 30 – P/2

B) Q = 60 – P/2

C) Q = P/2 – 60

D) Q = P/2 – 30

E) Q = 60 + P/2



QUESTION 9 (consumer surplus, continuous)

MB = 60 – 2Q

If the price is $10, then how much consumer surplus is there?

A) 60

B) 625

C) 900

D) 1250

E) 1800

answer to question 9

MB = 60 – 2Q

If the price is $10, then how much consumer surplus is there?

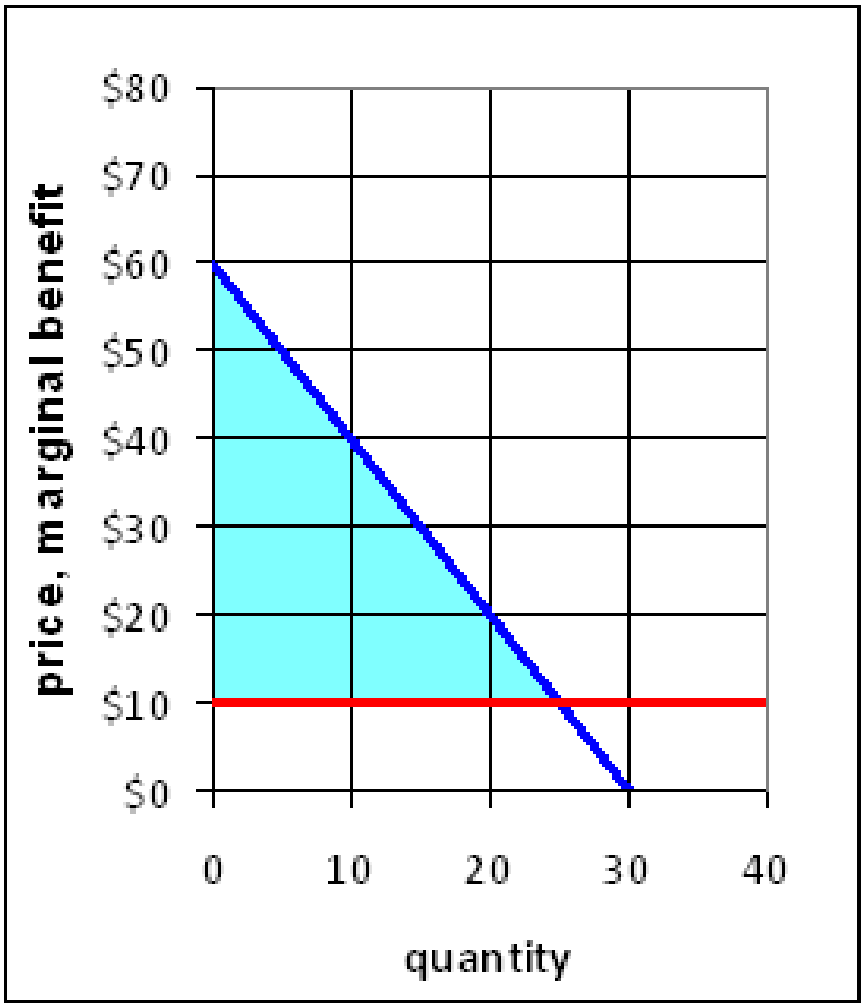
A) 60

B) 625

C) 900

D) 1250

E) 1800



QUESTION 10 (consumer surplus, continuous)

MB = 90 – 3Q

If the price is $30, then how much consumer surplus is there?

A) 2700

B) 600

C) 3600

D) 1200

E) 1350

answer to question 10

MB = 90 – 3Q

If the price is $30, then how much consumer surplus is there?

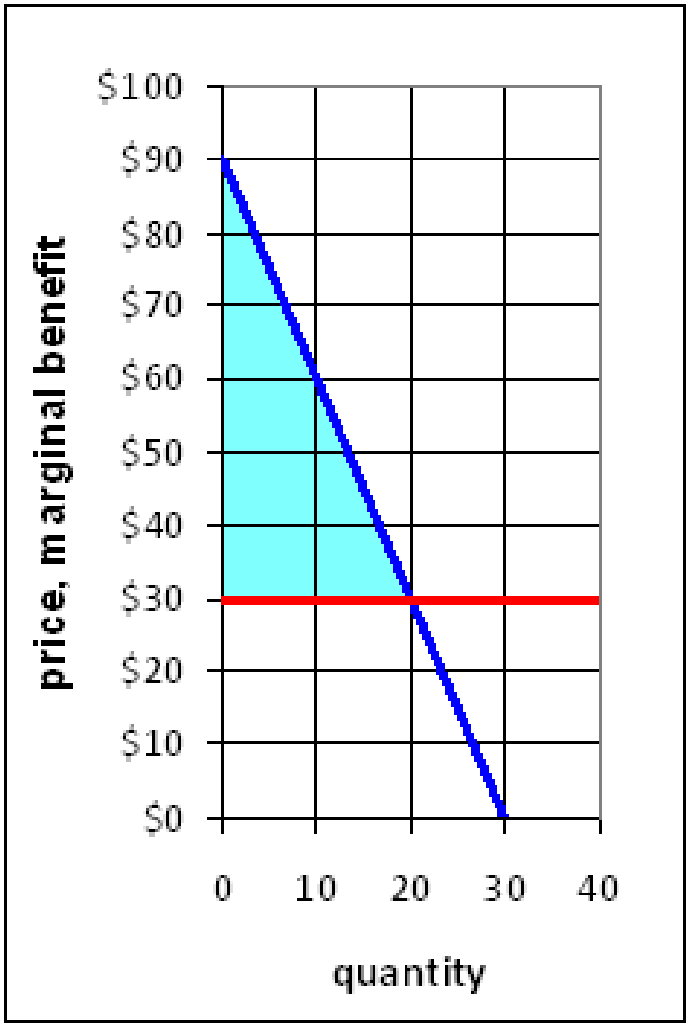
A) 2700

B) 600

C) 3600

D) 1200

E) 1350



QUESTION 11 (continuous supply)

Suppose that my firm produces some good with the total cost function $TC = 40Q + .25Q^2$, and the marginal cost function $MC = 40 + .5Q$.

If the price of the good I sell is $70, then how many units will I choose to sell?

A) 40 **B) 60** **C) 70** **D) 80** **E) 50**

answer to question 11

Suppose that my firm produces some good with the total cost function $TC = 40Q + .25Q^2$, and the marginal cost function $MC = 40 + .5Q$.

If the price of the good I sell is $70, then how many units will I choose to sell?

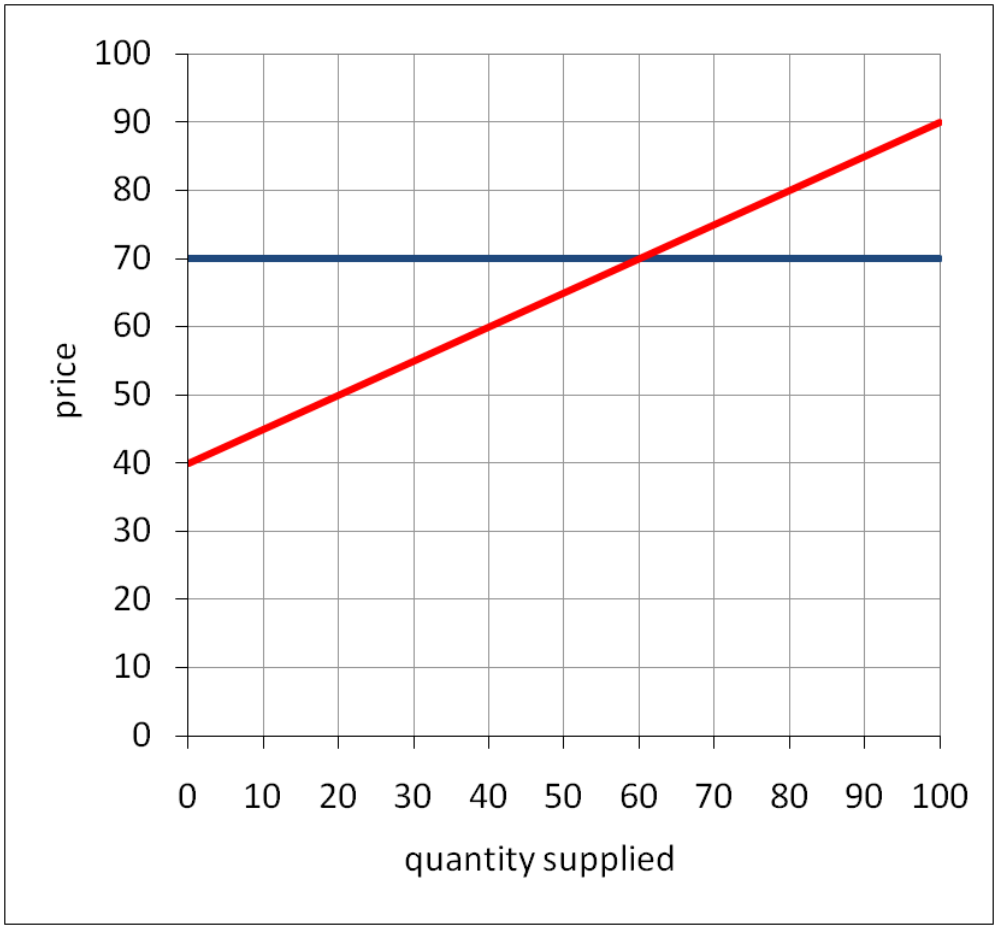
$40 + .5Q = 70$
$.5Q = 30$
$Q = 60$

A) 40 **B) 60** C) 70 D) 80 E) 50

QUESTION 12 (producer surplus)

$TC = 40Q + .25Q^2$
$MC = 40 + .5Q$

If the price of the good I sell is $70, and I sell 60 units of the good, then how much producer surplus will I get?



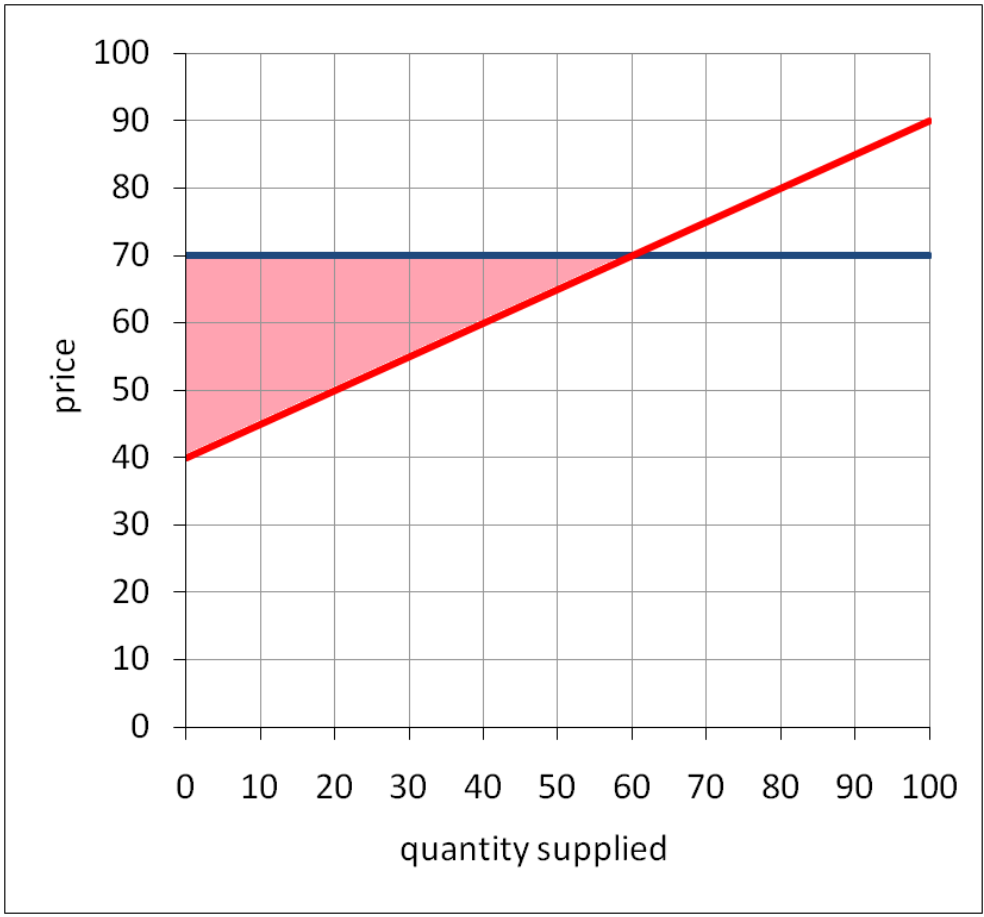
A) 400 **B) 600** **C) 1000** **D) 900** **E) 800**

answer to question 12

$TC = 40Q + .25Q^2$
$MC = 40 + .5Q$

If the price of the good I sell is $70, and I sell 60 units of the good, then how much producer surplus will I get?

(.5)(60)(30) = 900



A) 400 B) 600 C) 1000 **D) 900** E) 800

QUESTION 13 (adding demand functions)

Suppose that there are two potential buyers of a certain good: Alice and Bill. Their marginal benefit functions for the good are given below:

$$MB_A = 20 - 2Q \qquad MB_B = 10 - .5Q$$

If the price of the good is $4, what is the total quantity demanded?

A) 8 B) 20 C) 12 D) 4 E) 16

answer to question 13

Suppose that there are two potential buyers of a certain good: Alice and Bill. Their marginal benefit functions for the good are given below:

$MB_A = 20 - 2Q$ $\qquad$ $MB_B = 10 - .5Q$

If the price of the good is $4, what is the total quantity demanded?

$20 - 2Q_A = P$ $\qquad$ $10 - .5Q_B = P$

$2Q_A = 20 - P$ $\qquad$ $.5Q_B = 10 - P$

$Q_A = 10 - P/2$ $\qquad$ $Q_B = 20 - 2P$

$Q_A(4) = 8$ $\qquad$ $Q_B(4) = 12$

$Q(4) = 20$

A) 8 $\qquad$ **B) 20** $\qquad$ C) 12 $\qquad$ D) 4 $\qquad$ E) 16

QUESTION 14 (adding demand functions)

Suppose that there are two potential buyers of a certain good: Alice and Bill. Their marginal benefit functions for the good are given below:

$$MB_A = 20 - 2Q \qquad MB_B = 10 - .5Q$$

If the price of the good is $12, what is the total quantity demanded?

A) 4 B) 8 C) 1 D) 2 E) 6

answer to question 14

Suppose that there are two potential buyers of a certain good: Alice and Bill. Their marginal benefit functions for the good are given below:

$MB_A = 20 - 2Q$ $\qquad$ $MB_B = 10 - .5Q$

If the price of the good is $12, what is the total quantity demanded?

$20 - 2Q_A = P$ $\qquad$ $10 - .5Q_B = P$

$2Q_A = 20 - P$ $\qquad$ $.5Q_B = 10 - P$

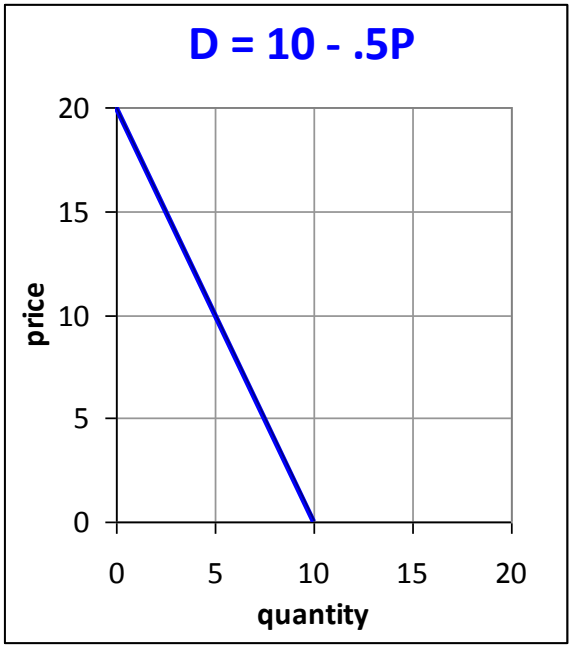
$Q_A = 10 - P/2$ $\qquad$ $Q_B = 20 - 2P$

$Q_A(12) = 4$ $\qquad$ $Q_B(12) = -4$?? no, 0

$Q(12) = 4$

A) 4 $\qquad$ B) 8 $\qquad$ C) 1 $\qquad$ D) 2 $\qquad$ E) 6

(page borrowed from chapter 5 lecture)



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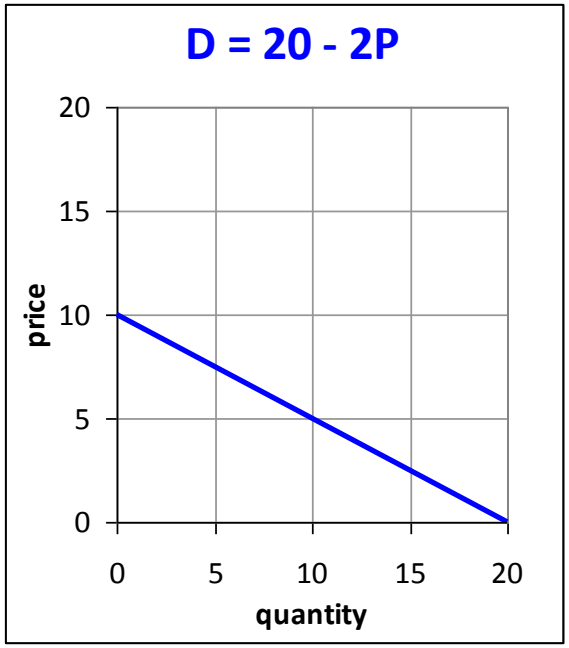

We usually assume that people can't consume negative quantities of a good…

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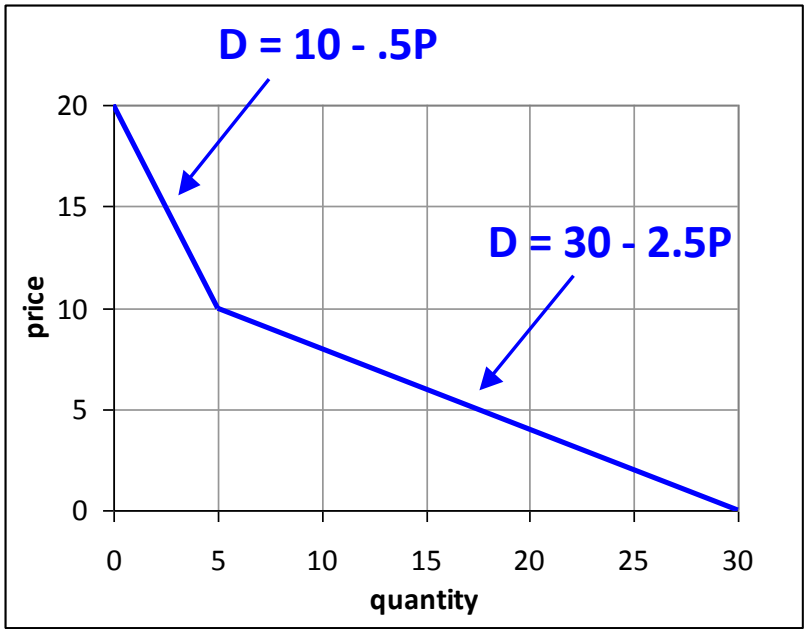

When buyers exit the market at different prices, there can be kinks in the graph.

QUESTION 17 (market equilibrium)

MB = 17 – 4Q

MC = 5 + 2Q

What is the market equilibrium price?

A) $2

B) $9

C) $4

D) $17

E) $5

answer to question 17

MB = 17 – 4Q

MC = 5 + 2Q

What is the market equilibrium price?

A) $2

B) $9

C) $4

D) $17

E) $5

answer to question 17, continued

$MB = 17 - 4Q$

$MC = 5 + 2Q$

$17 - 4Q = 5 + 2Q$

$6Q = 12$

$Q = 2$

$MB = 17 - 4(2) = 9$

$MC = 5 + 2(2) = 9$

QUESTION 18 (price elasticity of demand)

The demand curve has the equation
$Q = 200 - 10P$

What is the price elasticity of demand when the price is $5?

A) 0

B) – 2

C) – 3

D) – 1/2

E) – 1/3

answer to question 18

The demand curve has the equation
$Q = 200 - 10P$

What is the price elasticity of demand when the price is $5?

A) 0

B) – 2

C) – 3

D) – 1/2

E) – 1/3

QUESTION 19 (price elasticity of demand)

The demand curve has the equation
$Q = 10 - P$

What is the price elasticity of demand when the price is $3?

A) – 3/4

B) – 2/19

C) – 3/7

D) – 12/5

E) – 1

answer to question 19

The demand curve has the equation
$Q = 10 - P$

What is the price elasticity of demand when the price is $3?

A) – 3/4

B) – 2/19

C) – 3/7

D) – 12/5

E) – 1

QUESTION 20 (price elasticity of supply)

The supply curve has the equation
$Q = -10 + P$

What is the price elasticity of supply when the price is $50?

A) 2/3

B) 3/14

C) 8/9

D) 12/7

E) 5/4

answer to question 20

The supply curve has the equation
$Q = -10 + P$

What is the price elasticity of supply when the price is $50?

A) 2/3

B) 3/14

C) 8/9

D) 12/7

E) 5/4

QUESTION 21 (shifts in supply and demand)

Suppose that people enjoy bowling more when they are drinking a lot of beer.

If the government imposes a large tax on beer, what would most likely happen to the price and quantity of bowling alley rentals?

A) higher price, higher quantity

B) higher price, lower quantity

C) lower price, higher quantity

D) lower price, lower quantity

answer to question 21

Suppose that people enjoy bowling more when they are drinking a lot of beer.

If the government imposes a large tax on beer, what would most likely happen to the price and quantity of bowling alley rentals?

A) higher price, higher quantity

B) higher price, lower quantity

C) lower price, higher quantity

D) lower price, lower quantity

QUESTION 22 (shifts in supply and demand)

Suppose that leather becomes more expensive.

What would be most likely happen to the price and quantity of leather shoes?

A) higher price, higher quantity

B) higher price, lower quantity

C) lower price, higher quantity

D) lower price, lower quantity

answer to question 22

Suppose that leather becomes more expensive.

What would be most likely happen to the price and quantity of leather shoes?

A) higher price, higher quantity

B) higher price, lower quantity

C) lower price, higher quantity

D) lower price, lower quantity