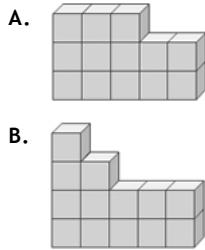


Multiple choice

1 2 3 4 5 6 7 8 9 10 **answers**

Question 1.

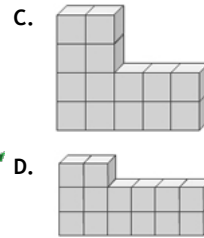


Solution:

Each new wall is one foot longer than the previous wall. The bottom two layers of each wall run the length of the wall. The top layer of each wall has 3 blocks, regardless of the wall's length.

Answer: D

2. Multiple representations in the real world | Testing | Multiple choice | Page 10 of 10



Question 2.

A.

f	8	10	12	14
b	1	2	3	4

B.

f	1	2	3	4
b	8	10	12	14

C.

f	8	10	12	14
b	3	4	5	6

D.

f	3	4	5	6
b	8	10	12	14

Solution:

The shortest wall is 3 feet long, and it has 8 blocks. The pattern indicates that each foot of length adds 2 new blocks to the wall.

Answer: D

2. Multiple representations in the real world | Testing | Multiple choice | Page 10 of 10

Question 3.

- A. The horizontal axis (x -axis) is labeled "Length of wall in feet."
 B. The first point on the graph is at (3,8) and the points form a curve.
 C. The vertical axis (y -axis) is labeled with "Number of blocks in wall."
 D. The first point on the graph is at (3,8) and the points would form a line.

Solution:

Each point on the graph is 1 unit to the right and 2 units above the previous point. This forces the points to lie on a line, not a curve.

Answer: B

2. Multiple representations in the real world | Testing | Multiple choice | Page 10 of 10

Question 4.

- A. $b = 2 + 2f$
 B. $b = 6 + 2f$
 C. $b = 6 + 2(f - 2)$
 D. $b = 8 + 2(f - 3)$

Solution:

This rule would be correct only if f represented the wall number (1, 2, 3, etc) instead of the length of the wall in feet (3, 4, 5, etc.) Because f represents the length of each wall, this rule will give 4 too many blocks for each wall.

Answer: B

2. Multiple representations in the real world | Testing | Multiple choice | Page 10 of 10

Question 5.

- A. As time passes, more water is being added to the pond.
 B. As time passes, the pond is losing water at a steady rate.
 C. As time passes, the amount of water in the pond is staying the same.
 D. As time passes, the pond is losing water, but the rate of loss is not steady.

Solution:

The graph indicates that as time passes, the amount of water in the pond is decreasing. Students can also make a table of some points on the line to see that the water decreases by the same amount each hour.

Answer: B

2. Multiple representations in the real world | Testing | Multiple choice | Page 10 of 10

Question 6.

- A. after 225 hours
 B. after 225 minutes
 C. after 9 hours
 D. after 9 minutes

Solution:

At 9 hours, the amount of water in the pond is 0 gallons. This is represented by the point (9,0) on the graph.

Answer: C

Question 7.

2. Multiple representations in the real world | Testing | Multiple choice | Page 2

A. A

✓ C. C

B. B

Solution:

The models indicate that the number of tiles in a wing increases by 1 each time. To complete the table, count the total number of tiles in each sidewalk figure.

Answer: C

Question 8.

2. Multiple representations in the real world | Testing | Multiple choice | Page 2

A. $t = 3 + 2w$

C. $t = 1 + 2(w + 1)$

✓ B. $t = 3 + w$

Solution:

Each of the walkways can be thought of as having 3 tiles in the central part, plus 2 wings with w tiles in each wing. This is modeled by $t = 3 + 2w$. The second set of the walkways can also be thought of as 1 "central" sidewalk tile, plus 2 wings of w tiles that each connect to 1 more walkway tile. This is modeled by $t = 1 + 2(w + 1)$. The representation $t = 3 + w$ indicates there is only one wing in a figure, not two.

Answer: B

Question 9.

2. Multiple representations in the real world | Testing | Multiple choice | Page 2

A. The cost of any length call is \$3.50.

C. The cost of any call is the number of minutes times \$0.10.

B. The longer the call, the higher the cost.

✓ D. The cost of any call is \$3.50 plus the number of minutes times \$0.10.

Solution:

Notice that a call of 0 minutes still costs \$3.50. This indicates the plan has a fixed fee of \$3.50, and charges are added to that depending on the length of the call.

Answer: D

Question 10.

2. Multiple representations in the real world | Testing | Multiple choice | Page 2

A. $c = 3.50m$

✓ C. $c = 3.50 + 0.10m$

B. $c = 3.50 + m$

D. $c = 3.60 + 0.10m$

Solution:

There is a fixed cost of \$3.50 plus a charge of 10 cents for each minute.

Answer: C