

Chapter 9 Practice Test

Chapter 9 Practice Test Page 362 Question 1

Answer: C
You can describe $2x - 1$ as an expression.

Chapter 9 Practice Test Page 362 Question 2

Answer: B
The number of toothpicks in the perimeter is three times the corresponding number of toothpicks in the base.

Toothpicks in Base (b)	Toothpicks in Perimeter
1	3
2	6
3	9

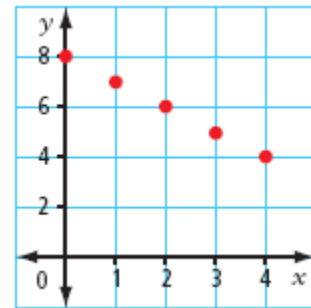


Chapter 9 Practice Test Page 362 Question 3

Answer: C
The table of values for C matches the points shown on the graph.

C

x	0	1	2	3	4
y	8	7	6	5	4



Chapter 9 Practice Test Page 362 Question 4

Answer: C
The only set of y -values that correspond to their x -values for the linear equation $y = 3x - 2$ is found in C.

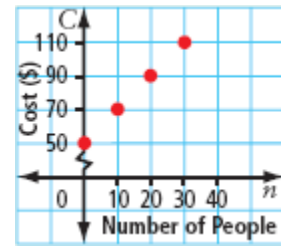
x	y
2	4
3	7
4	10

Chapter 9 Practice Test Page 362 Question 5

Answer: **D**

The cost for the room rental is \$50 with no people included. Therefore, the graph must have a point at (0, 50). When 10 people are included at \$2 per person, then the charge increases by \$20:

$$\begin{aligned} \text{Total cost for 10 people:} \\ &= 10 \times 2 + 50 \\ &= 20 + 50 \\ &= 70 \end{aligned}$$



The total cost for 10 people is \$70. Therefore, the point (10, 70) would be part of the graph. The only graph with these two points is D.

Chapter 9 Practice Test Page 362 Question 6

If the equation is $s = -4t + 2$, the value for s in $(-1, s)$ is 6.

$$\begin{aligned} s &= -4(-1) + 2 \\ &= 4 + 2 \\ &= 6 \end{aligned}$$

Chapter 9 Practice Test Page 362 Question 7

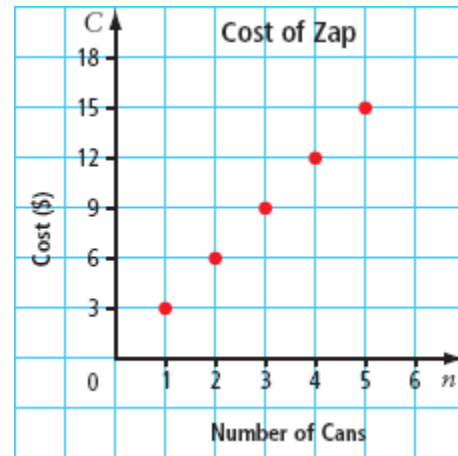
To describe the graph in #3, you can say that when the x -coordinate increases by 1, the y -coordinate decreases by 1.

Chapter 9 Practice Test Page 363 Question 8

a) Look at the y-coordinate that corresponds to the point in the graph that has an x-coordinate of 1. The price per can of Zap is \$3.00.

b) Answers may vary. Example:

- For every increase in 1 can of Zap purchased, there is an increase of \$3.00 in cost.
- The points appear to lie on a straight line, so the graph shows a linear relation.
- The graph shows that to move from one point to the next, you go one unit horizontally and three units vertically.
- The values for both variables in the table have a constant difference.



c) The x-coordinate of 0 in the point (0, 0) would correspond to zero cans of Zap purchased. The y-coordinate of zero would indicate that the cost is \$0.

Chapter 9 Practice Test Page 363 Question 9

a)

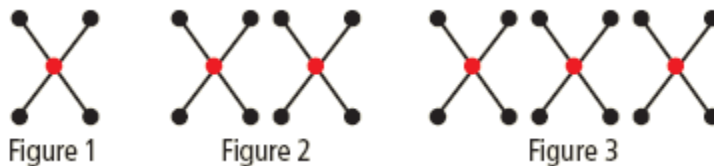


Figure Number	Number of Black Dots
1	4
2	8
3	12
4	16
5	20

b) For $f = 60$:

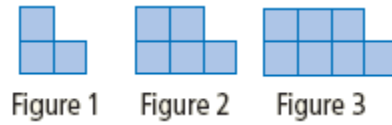
$$b = 4(60)$$

$$b = 240$$

There are 240 black dots in Figure 60.

a) The formula is $s = 2f + 1$.

Figure Number	Number of Small Squares
1	3
2	5
3	7
4	9
5	11



b) Plot the figure number along the horizontal axis.

c) Yes, the relationship is linear. Answers may vary. Example: In the table of values, consecutive values of f always increase by 1, and consecutive values of s always increase by 2. Also, the points appear to lie on a straight line.

