

## Lesson 4 Practice Problems

1. Match each equation with a description of the function it represents.

A.  $f(x) = 2x + 4$

B.  $g(x) = 2(x + 4)$

C.  $h(x) = 4x + 2$

D.  $k(x) = 4(x + 2)$

1. To get the output, add 4 to the input, then multiply the result by 2.

2. To get the output, add 2 to the input, then multiply the result by 4.

3. To get the output, multiply the input by 2, then add 4 to the result.

4. To get the output, multiply the input by 4, then add 2 to the result.

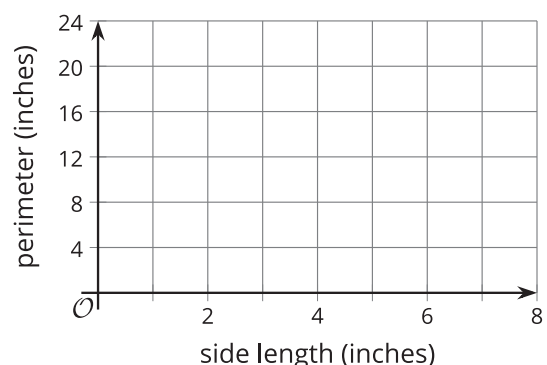
2. Function  $P$  represents the perimeter, in inches, of a square with side length  $x$  inches.

a. Complete the table.

$x$	0	1	2	3	4	5	6
$P(x)$							

b. Write an equation to represent function  $P$ .

c. Sketch a graph of function  $P$ .



3. Functions  $f$  and  $A$  are defined by these equations.

$$f(x) = 80 - 15x$$

$$A(x) = 25 + 10x$$

Which function has a greater value when  $x$  is 2.5?

4. An equilateral triangle has three sides of equal length. Function  $P$  gives the perimeter of an equilateral triangle of side length  $s$ .
- Find  $P(2)$
  - Find  $P(10)$
  - Find  $P(s)$
5. Imagine a situation where a person is using a garden hose to fill a child's pool. Think of two quantities that are related in this situation and that can be seen as a function.
- Define the function using a statement of the form “\_\_\_\_\_ is a function of \_\_\_\_\_”. Be sure to consider the units of measurement.

- Sketch a possible graph of the function. Be sure to label the axes.

Then, identify the coordinates of one point on the graph and explain its meaning.



(From Unit 4, Lesson 1.)

6. Function  $C$  gives the cost, in dollars, of buying  $n$  apples.

Which statement best represents the meaning of  $C(10) = 9$ ?

- The cost of buying 9 apples
- The cost of 9 apples is \$10.
- The cost of 10 apples
- Ten apples cost \$9.

(From Unit 4, Lesson 2.)

7. Diego is baking cookies for a fundraiser. He opens a 5-pound bag of flour and uses 1.5 pounds of flour to bake the cookies.

Which equation or inequality represents  $f$ , the amount of flour left in the bag after Diego bakes the cookies?

A.  $f = 1.5$

B.  $f < 1.5$

C.  $f = 3.5$

D.  $f > 3.5$

(From Unit 2, Lesson 18.)