Name_____ Date_____

Chapter 6 Fair Game Review

Find the missing value in the table.

1.

x	y
1	5
3	7
5	9
7	

2.

x	y
2	6
4	12
8	24
12	

3.

x	y
6	11
14	19
26	31
41	

4.

x	y
8	4
18	9
28	14
38	

5.

x	y
4	2.5
11	9.5
15	13.5
21	

6.

x	y
6	5.8
15	14.8
22.8	22.6
31.4	

Chapter 6 Fair Game Review (continued)

Evaluate the expression when $x = 2$, $y = 3$, and $z = -4$.

7. $3x - 2$

8. $-6 - 2y$

9. $2z^2$

10. $3y - 3z$

11. $\dfrac{8}{x} - 1$

**12.** $-1 + \dfrac{z}{2}$

6.2 Representations of Functions
For use with Activity 6.2

Essential Question How can you represent a function in different ways?
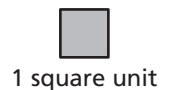
1 ACTIVITY: Describing a Function

Work with a partner. Complete the mapping diagram on the next page for the area of the figure. Then write an equation that describes the function.
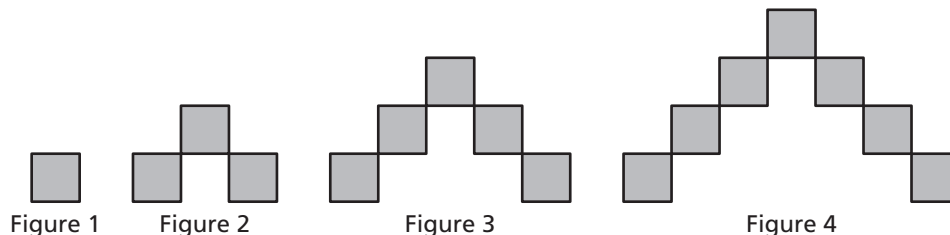
a.

|———2———|———2———|

x

b.

x

2

$2x$

Input, x	Output, A
1	
2	
3	
4	

Input, x	Output, A
1	
2	
3	
4	
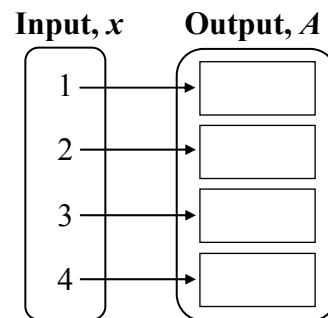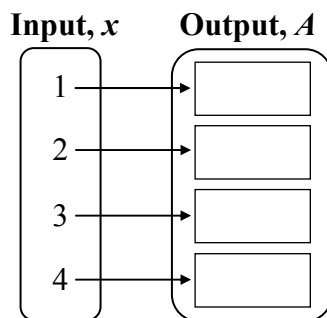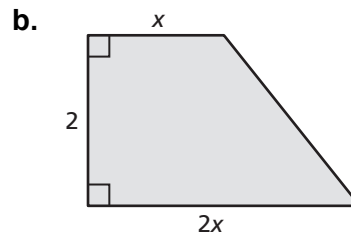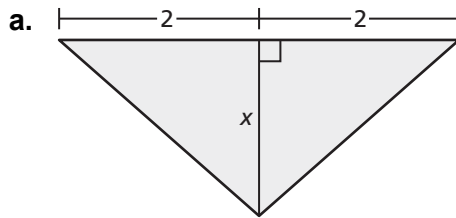
2 ACTIVITY: Using a Table

Work with a partner. Make a table that shows the pattern for the area, where the input is the figure number x and the output is the area A. Write an equation that describes the function. Then use your equation to find which figure has an area of 81 when the pattern continues.
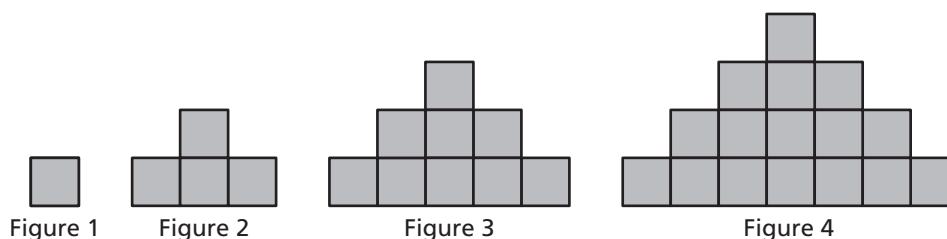
1 square unit

a.

Figure 1   Figure 2   Figure 3   Figure 4

6.2 **Representations of Functions** (continued)

b.


Figure 1   Figure 2   Figure 3   Figure 4

3 **ACTIVITY:** Using a Graph

Work with a partner. Graph the data. Use the graph to test the truth of each statement. If the statement is true, write an equation that shows how to obtain one measurement from the other measurement.

  a. "You can find the horsepower of a race car engine if you know its volume in cubic inches."
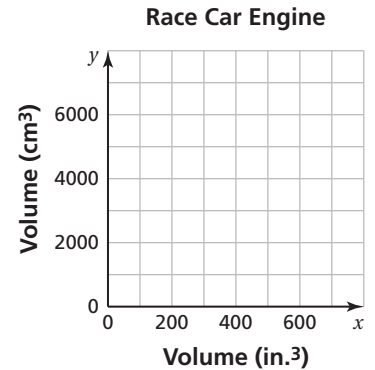
Volume (cubic inches), x	200	350	350	500
Horsepower, y	375	650	250	600
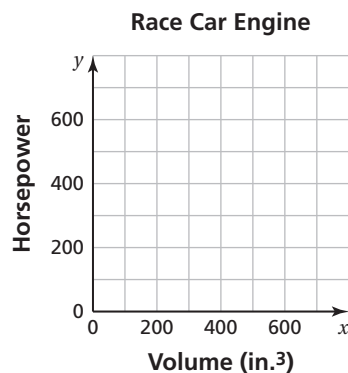
Race Car Engine

6.2 **Representations of Functions** (continued)

**b.** "You can find the volume of a race car engine in cubic centimeters if you know its volume in cubic inches."

Volume (cubic inches), *x*	100	200	300
Volume (cubic centimeters), *y*	1640	3280	4920

Race Car Engine

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4 **ACTIVITY:** Interpreting a Graph

Work with a partner. The table shows the average speeds of the winners of the Daytona 500. Graph the data. Can you use the graph to predict future winning speeds? Explain why or why not.

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Speed (mi/h)	156	135	143	149	153	133	137	130	140

Daytona 500 Winners' Average Speeds
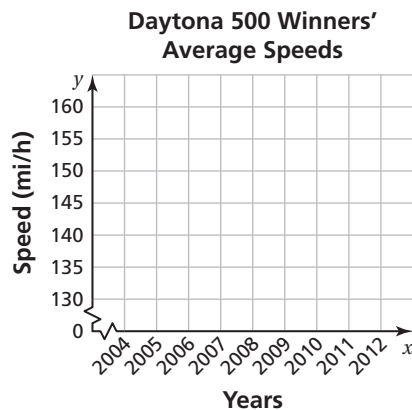
What Is Your Answer?

5. IN YOUR OWN WORDS How can you represent a function in different ways?