Name_____ Date_____

9.3 Input-Output Tables

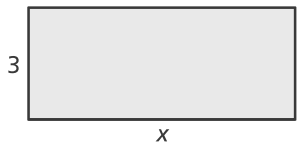
For use with Activity 9.3

Essential Question How can you use a table to describe a function?

1 ACTIVITY: Using a Function Table

Work with a partner.

a. Complete the table for the perimeter of the rectangle.



Input, *x*	1	2	3	4	5
Output, *P*					

b. Write an equation that describes the function.

c. Use your equation to find the values of x for which the perimeter is 50.

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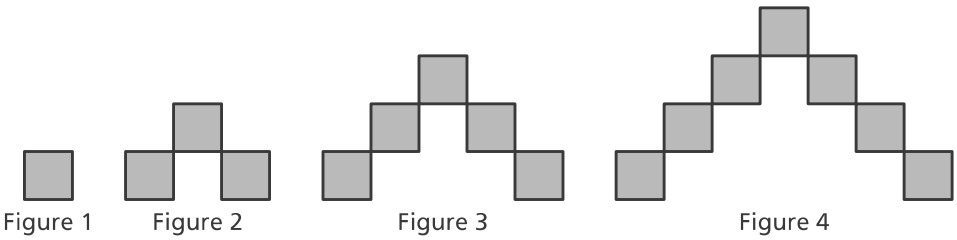
9.3 Input-Output Tables (continued)

2 ACTIVITY: Using a Function Table

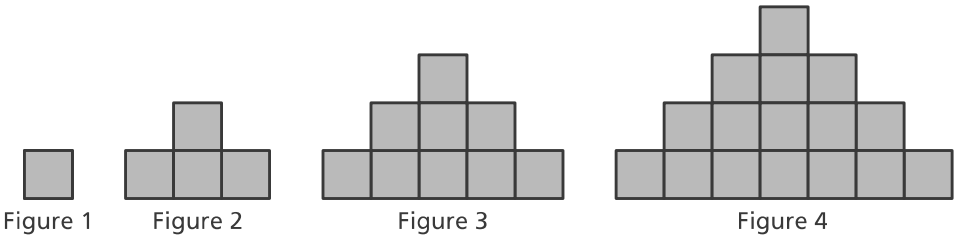
Work with a partner. Use the strategy shown in Activity 1 to make a table that shows the pattern for the area. Write an equation that describes the function. Then use your equation to find which figure has an area of 81.

1 square unit

a.



b.



3 ACTIVITY: Making a Function Table

Work with a partner. Complete a sales tax table for each of the four cities.

Madison, WI, 5.50%

Sale, *x*	\$20	\$30	\$40	\$50	\$60
Sales tax, *T*					

Ann Arbor, MI, 6.00%

Sale, *x*	\$20	\$30	\$40	\$50	\$60
Sales tax, *T*					

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9.3 Input-Output Tables (continued)

Edison, NJ, 7.00%

Sale, *x*	$20	$30	$40	$50	$60
Sales tax, *T*					

Norman, OK, 7.50%

Sale, *x*	$20	$30	$40	$50	$60
Sales tax, *T*					

What Is Your Answer?

4. **IN YOUR OWN WORDS** How can you use a table to describe a function? Describe an example of a function table in real life.

Amount of Sale	Tax
.10 – .16	.01
.17 – .33	.02
.34 – .50	.03
.51 – .66	.04
.67 – .83	.05
.84 – 1.09	.06

"Dear Sir: Yesterday, I bought a piece of 9-cent candy six times and paid NO tax. Today, I bought six pieces at once and you charged me $0.04 tax. What's going on?"

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9.3 Practice

For use after Lesson 9.3

Write an equation for the function. Then complete the table.

1. The output is half of the input.

Input, *x*	0	2	4	6
Output, *y*				

2. The output is 5 less than the input.

Input, *x*	5	7	9	11
Output, *y*				

Write an equation for the function shown by the table.

3.

Input, *x*	1	2	3	4
Output, *y*	7	8	9	10

4.

Input, *x*	0	3	5	9
Output, *y*	0	6	10	18

Complete the table.

5. For each output, multiply the input by 8, then add 3.

Input, *x*	1	5		
Output, *y*	11	43	59	83

6. For each output, divide the input by 4, then subtract 1.

Input, *x*	4	8		
Output, *y*	0	1	2	3

7. You take a class to learn sign language. It costs \$8 for each class you attend. Complete the input-output table. Write a function rule in which x is the input and y is the output.

Class, *x*	1	2	3	4
Cost, *y*				

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