

NAME _____

Module 9 Using Functions
Lesson 3 Writing Functions from Patterns



guided
practice

Set 1

1. Javier has designed a simple robot that can pick up blocks and stack them in groups. The table shows how many blocks the robot can stack in a given time period.

Input	Output
Number of Minutes Stacking	Number of Blocks Stacked
1	1
2	2
8	8

Write a function to represent the pattern and use it to find how many blocks the robot can stack in 19 minutes.

$f(x) = x$; The robot can stack 19 blocks in 19 minutes.

2. Write a function for the pattern shown in the

table. **$f(x) = \frac{1}{4}x + 1$**

Input	Output
0	1
1	$1\frac{1}{4}$
2	$1\frac{1}{2}$
3	$1\frac{3}{4}$

3. Write a function for the pattern shown in the

table. **$f(x) = 3x - 1$**

Input	Output
-4	-13
-1	-4
3	8
7	20

4. Find a function that contains the following ordered pairs:
(0, -11), (1, -7), (2, -3), (3, 1)

$$f(x) = 4x - 11$$

5. Find a function that contains the following ordered pairs:
(-1, -1.5), (-2, -0.5), (-3, 0.5), (-4, 1.5)

$$f(x) = -x - 2.5$$

Set 2

1. Write a function for the input/output table.

$$f(x) = |x|$$

Input	Output
-5	5
-1	1
3	3
7	7

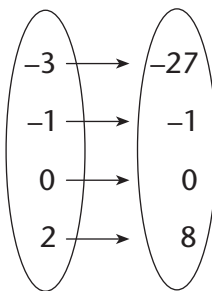
2. Write a function for the input/output table.

$$f(x) = \frac{1}{x}$$

Input	Output
-4	$-\frac{1}{4}$
1	1
3	$\frac{1}{3}$
8	$\frac{1}{8}$

3. Write a function for the given mapping.

$$f(x) = x^3$$



4. Write a function for the given mapping.

$$f(x) = x^2 + 5$$

