NAME _____ DATE _____

Module 9 Using Functions
Lesson 3 Writing Functions from Patterns

guided notes

Lesson Objectives

- Write a function rule for a linear pattern.
- Write a function rule for a nonlinear pattern.

1 A function *f* had the following input/output values. Write an equation to define the function *f*, and use it to find the output when the input is –9.

Input	Output
5	$\frac{5}{3}$
4	$\frac{4}{3}$
3	1

_____

2 John was given the following input/output table by a friend. Write a function for the pattern in the table. _____

Input	Output
–1	0
4	0
6	0
10	0

To find a function rule for a linear pattern, use the _____ along with one of the input/output pairs in the pattern to determine the *y*-intercept. Then, write the rule in slope-intercept form.

3 Write a function for the pattern shown in the table.

_____

Input	Output
2	1
4	–1
6	–3
8	–5

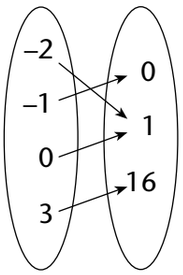
4 Find a function containing the following ordered pairs: (0, 5), (3, 7), (6, 9), (9, 11) _____

5 Write a function for the input/output table.

Input	Output
0	0
1	1
4	2
9	3
25	5

_____

6 Write a function for the given mapping.



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