Name _____ Class _____ Date _____

4-3 Practice   *Form K*

Patterns and Nonlinear Functions

1. A worker's wages W, in dollars, is a function of the number h of hours worked. Graph the function shown by the table. Tell whether the function is *linear* or *nonlinear*.

Hours, h	2	4	6	8	10
Wages ($), W	20	40	60	80	100

Graph the function shown by each table. Tell whether the function is *linear* or *nonlinear*.

2.

x	y
0	−1
1	0
2	3
3	8

3.

x	y
0	−4
1	2
2	8
3	14

4-3

Practice (continued)   *Form K*

Patterns and Nonlinear Functions

Each set of ordered pairs represents a function. Write a rule that represents the function.

4. (0, 0), (1, 1), (2, 4), (3, 9), (4, 16)

5. (0, 1), (1, 5), (2, 9), (3, 13), (4, 17)

6. (0, –1), (1, 0), (2, 7), (3, 26), (4, 63)

7. (0, 2), (1, 1), (2, 0), (3, –1), (4, –2)

8. **Writing** How can you determine if a function is linear or nonlinear from the graph of the function?

9. **Error Analysis** A student says that the function shown by the table below can be represented by the rule $y = x^2 - 1$. Describe and correct the error.

x	0	1	2	3	4
y	−1	1	3	5	7