

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

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

nonlinear.

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

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