

# Patterns and Nonlinear Functions Assignment

Graph the function represented by the data in each table. Tell whether the function is linear or non-linear.

1.

$x$	$y$
0	1
1	2
2	5
3	10

Graph:

2.

$x$	$y$
1	1
2	2
3	3
4	4

Graph:

## Patterns and Nonlinear Functions Assignment

3.

$x$	$y$
-2	0
-1	1
0	2
1	3

Graph:

4.

$x$	$y$
-2	-7
-1	0
0	1
1	2

Graph:

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

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

Rule:

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

## Patterns and Nonlinear Functions Assignment

2.  $(-1,2), (0,1), (1,2), (2,5), (3,10)$

**Rule:**

3.  $(-1,1), (0,2), (1,3), (2,10), (3,29)$

**Rule:**

4.  $(0,-1), (1,0), (2,1), (3,2), (4,3)$

**Rule:**

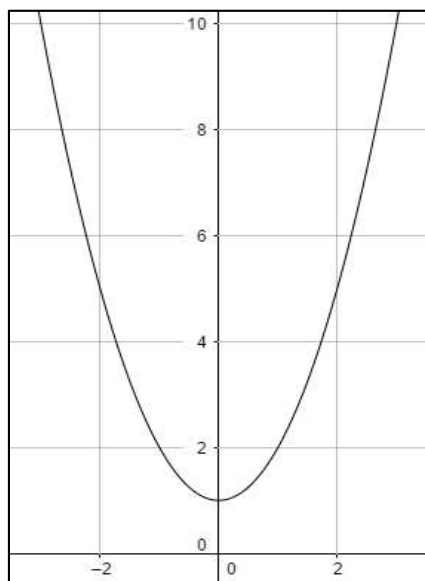
# Patterns and Nonlinear Functions Assignment

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1.

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0	1
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Graph:

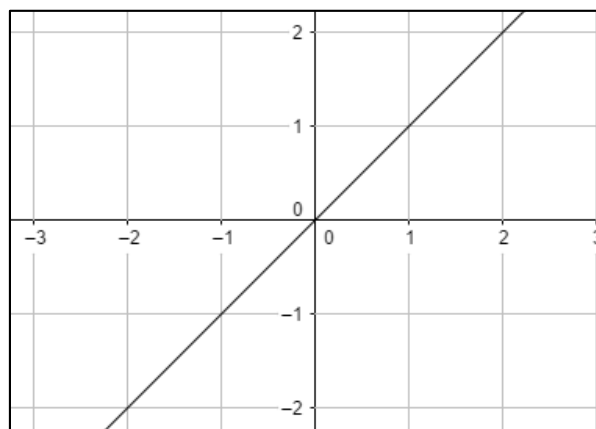


Since the graph is not a straight line,  
it represents a nonlinear function.

2.

$x$	$y$
1	1
2	2
3	3
4	4

Graph:



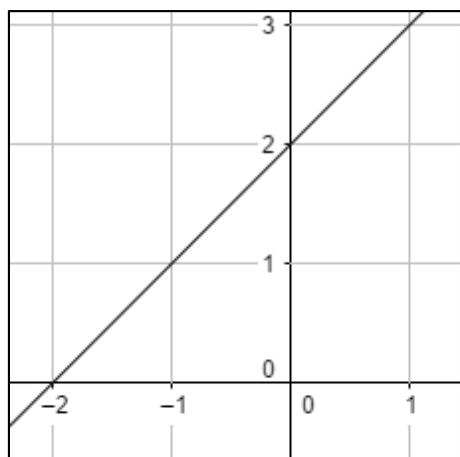
Since the graph is a straight line,  
it represents a linear function.

**Patterns and Nonlinear Functions** Assignment

3.

$x$	$y$
-2	0
-1	1
0	2
1	3

Graph:

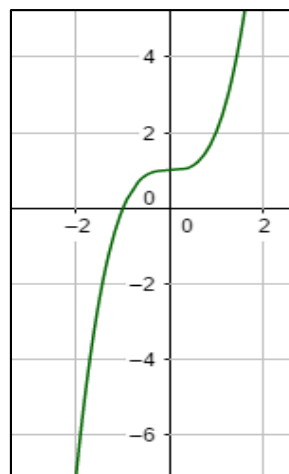


Since the graph is a straight line,  
it represents a linear function.

4.

$x$	$y$
-2	-7
-1	0
0	1
1	2

Graph:



Since the graph is a straight line,  
it represents a linear function.

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

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

Rule:  $y = 4x + 1$

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

## Patterns and Nonlinear Functions Assignment

2.  $(-1,2), (0,1), (1,2), (2,5), (3,10)$

Rule:  $y = x^2 + 1$

3.  $(-1,1), (0,2), (1,3), (2,10), (3,29)$

Rule:  $y = x^3 + 2$

4.  $(0,-1), (1,0), (2,1), (3,2), (4,3)$

Rule:  $y = x - 1$