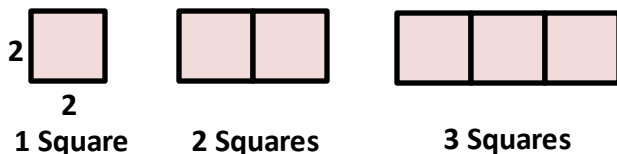


# Pattern and Linear Functions Assignment

For each diagram, find the relationship between the number of shapes and the perimeter of the figure they form. Then represent this relationship using words, an equation, a table and a graph.

1.



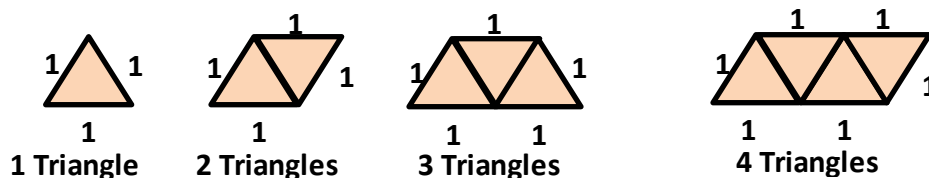
Using words:

Using Equation:

Using table:

Using Graph:

2.



Using words:

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

## Pattern and Linear Functions Assignment

Using Equation:

Using table:

Using Graph:

For each table, determine whether the relationship is a function. If yes, then represent the relation using words, an equation and ordered pairs.

1.

x	1	3	5	7	9
y	3	5	7	9	11

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

## Pattern and Linear Functions Assignment

2.

<b>a</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>6</b>	<b>8</b>
<b>b</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>11</b>	<b>11</b>

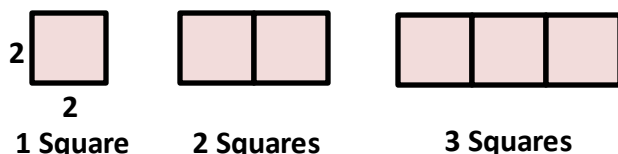
3.

<b>y</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>z</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>

## Pattern and Linear Functions Assignment

For each diagram, find the relationship between the number of shapes and the perimeter of the figure they form. Then represent this relationship using words, an equation, a table and a graph.

1.



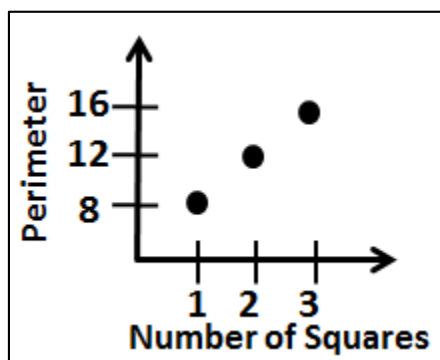
Using words: The perimeter is 4 more than 4 times the number of squares.

Using Equation:  $P = 4n + 4$  ;  $P$  = Perimeter,  $n$  = number of squares

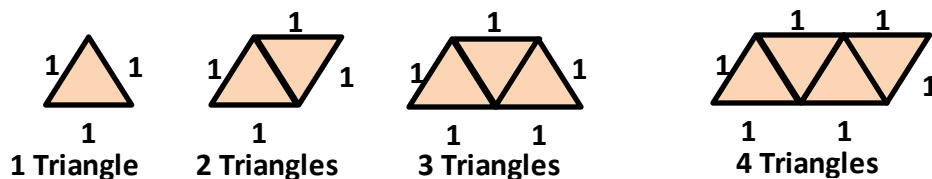
Using table:

Number of Squares	1	2	3
Perimeter	8	12	16

Using Graph:



2.



Using words: The perimeter is 2 more than the number of triangles

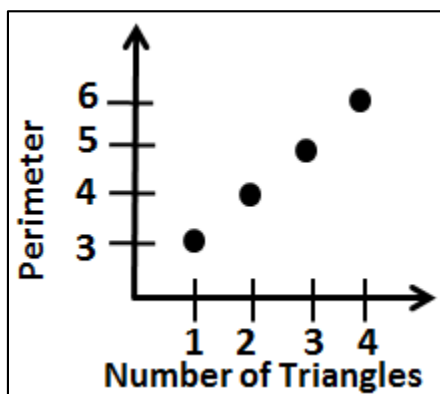
## Pattern and Linear Functions Assignment

Using Equation:  $P = n + 2$  ;  $P = \text{Perimeter}$ ,  $n = \text{number of triangles}$

Using table:

Number of Triangles	1	2	3	4
Perimeter	3	4	5	6

Using Graph:



For each table, determine whether the relationship is a function. If yes, then represent the relation using words, an equation and ordered pairs.

1.

x	1	3	5	7	9
y	3	5	7	9	11

Yes, it is a function.

Using words:  $y$  is 2 more than  $x$

Using Equation:  $y = x + 2$

Using ordered pairs:  $(1,3), (3,5), (5,7), (7,9), (9,11)$

**Pattern and Linear Functions** Assignment

2.

<b>a</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>6</b>	<b>8</b>
<b>b</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>11</b>	<b>11</b>

No, it is not a function since the input  $a = 4$  is associated with two values of output  $b$  which contradicts the definition of a function.

3.

<b>y</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>z</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>

Yes, it is a function.

Using words:  $z$  is 6 more than  $y$

Using Equation:  $z = y + 6$

Using ordered pairs:  $(0,6), (1,7), (2,8), (3,9), (4,10)$