HW SOL 10.2

May 3, 2018   8:48 AM

Name:_____   Date:_____

HW Section 10.2 Finding Patterns in a Table of Values

1. The perimeter of a square is equal to the side length multiplied by 4. Complete the following table of values:

Perimeter (cm)	16	26	84	84
Side Length	4	6.5	21	21

2. The following table is for the relationship between the side length of a hexagon and its perimeter. Complete the TOV:

Perimeter (cm)	18	42	N/A	72
Side Length	3	7	−5	12

3. Given that the relationship is supposed to be linear, which row does not belong in the table of values? Which value would you change to make it into a linear relationship?

x	y
2	3
4	6
6	9
8	12

x	y
1	5
2	9
3	13
4	17

x	y
−3	6
0	8
3	10
6	12

x	y
2	2
5	11
9	23
13	35

x	y
7	8
4	5
1	−2
5	6

| X	y
1	2
4	5
5	6
7	8

4. Given each table of values, find the equation that relates the two variables and then find the values for the missing boxes:

x	y
1	9
2	10
3	11
4	12
5	
6	

$x + 8 = y$

x	y
1	−3
3	−1
5	1
7	3
11	
15	

$x - 4 = y$

x	y
2	5
4	11
6	17
8	23
12	
16	

$3x - 1 = y$

$y = 3x - 1$

x	y
2	5
5	8
8	11
11	14
	23
56	

x	y
−4	−4
−2	2
0	8
2	14
	26
	86

$3x + 8 = y$

x	y
5	10
3	15
1	20
−1	25
	−15
9	

$5x - 45 = -2y$

5. Given the figures below, derive a formula for the numbers of small little squares (S) vs the figure number (N)

Figure 1   Figure 2   Figure 3
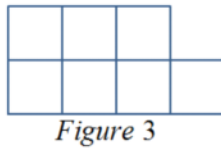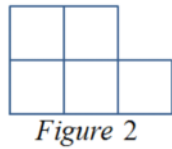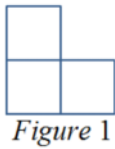
a) Derive a formula for the total number of possible squares (T) vs the figure number (N)?

b) Make a table of values and then graph it. Is this a linear relationship?
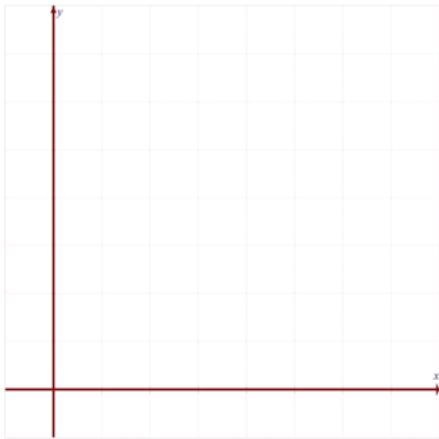
6. Challenge: Suppose you connect the dots next to each other and count the number of little triangles. Make a table of values for the number of dots and the number of little triangles. Is this relationship linear?

1   3   6

0   1   6

DOTS VS. TRIANGLES

10
9

DOTS	TRIANGLES
1	0
3	1
6	4
10	9

NOT LINEAR

# of DOTS.

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