

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:

<i>Perimeter (cm)</i>				84
<i>Side Length</i>	4	6.5	21	

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

<i>Perimeter (cm)</i>				72
<i>Side Length</i>	3	7	-5	

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	11

x	y
1	5
2	9
3	12
4	17

x	y
-3	6
0	7
3	10
6	12

x	y
2	2
5	11
9	22
13	35

x	y
7	8
4	5
1	-2
5	6

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

<table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>1</td><td>9</td></tr> <tr><td>2</td><td>10</td></tr> <tr><td>3</td><td>11</td></tr> <tr><td>4</td><td>12</td></tr> <tr><td>5</td><td></td></tr> <tr><td>6</td><td></td></tr> </table>	x	y	1	9	2	10	3	11	4	12	5		6		<table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>1</td><td>-3</td></tr> <tr><td>3</td><td>-1</td></tr> <tr><td>5</td><td>1</td></tr> <tr><td>7</td><td>3</td></tr> <tr><td>11</td><td></td></tr> <tr><td>15</td><td></td></tr> </table>	x	y	1	-3	3	-1	5	1	7	3	11		15		<table border="1"> <tr><td>x</td><td>y</td></tr> <tr><td>2</td><td>5</td></tr> <tr><td>4</td><td>11</td></tr> <tr><td>6</td><td>17</td></tr> <tr><td>8</td><td>23</td></tr> <tr><td>12</td><td></td></tr> <tr><td>16</td><td></td></tr> </table>	x	y	2	5	4	11	6	17	8	23	12		16	
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5. Given the figures below, derive a formula for the numbers of small little squares (S) vs the figure number (N)

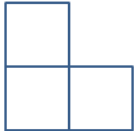


Figure 1



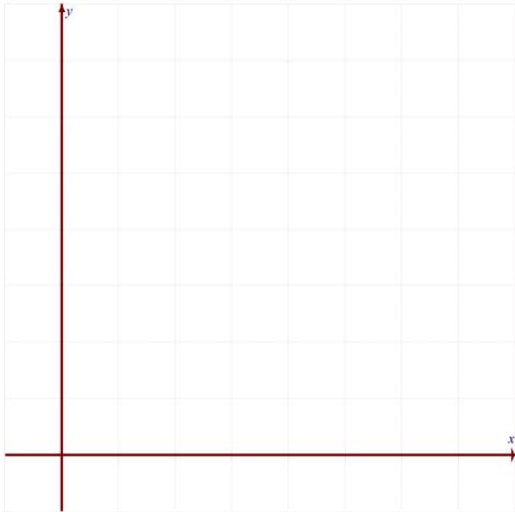
Figure 2



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?

