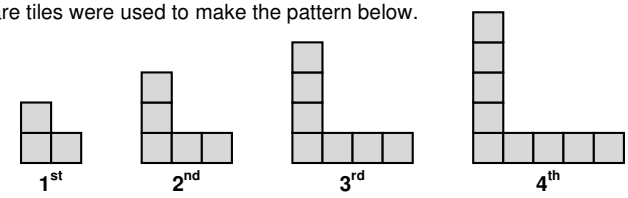
Working with Tile Patterns

1. Square tiles were used to make the pattern below.



a. Draw the the 5th and 6th figure.

b. Draw the 0th figure.

c. Complete a table to show the number of tiles in each of the first ten figures.

d. Describe the pattern in words.

e. Is the pattern linear or non-linear? Explain.

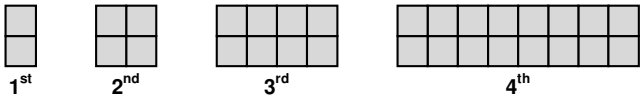
f. Write an equation for the number of tiles ***t*** in the ***n***th figure.

Figure #	Tiles
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

g. How many tiles are in the 25th figure? Clearly show or explain how you know.

h. Identify the figure in the pattern that can be made with exactly 75 tiles. Clearly show or explain how you know.

2. Square tiles were used to make the pattern below.



a. Complete a table to show the number of tiles in each of the first ten figures.

b. Describe the pattern in words.

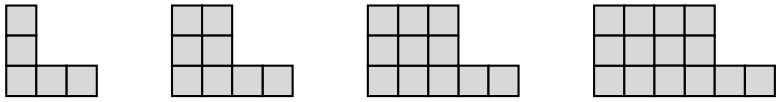
c. Is the pattern linear or non-linear? Explain.

Bonus: Write an equation for the number of tiles ***t*** in the ***n***th figure.

d. How many tiles are in the 15th figure? Show or explain how you know.

Figure #	Tiles
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

3. Square tiles were used to make the pattern below.



a. Complete a table to show the number of tiles in each of the first ten figures.

b. Describe the pattern in words.

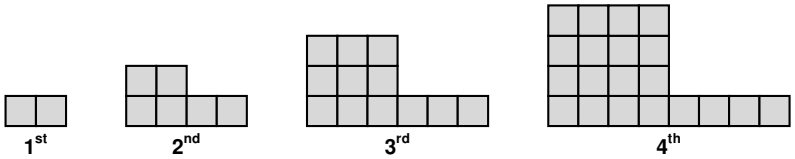
c. Is the pattern linear or non-linear? Explain.

d. Write an equation for the number of tiles ***t*** in the ***n***th figure.

e. How many tiles are in the 25th figure? Show or explain how you know.

Figure #	Tiles
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

4. Square tiles were used to make the pattern below.



a. Complete a table to show the number of tiles in each of the first ten figures.

b. Describe the pattern in words.

c. Is the pattern linear or non-linear? Explain.

d. Write an equation for the number of tiles ***t*** in the ***n***th figure.

e. How many tiles are in the 25th figure? Show or explain how you know.

Figure #	Tiles
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

5. Design a series of tile designs that have a linear pattern.
Write an equation for the number of tiles.

6. Design a series of tile designs that have a nonlinear pattern.
Write an equation for the number of tiles.