Math **Worksheet #1: Exploring Patterns** Heading:

1. For each section, complete the missing information.

A. Notice how the pattern is changing. Now draw the missing figures and shade the part that grows in each consecutive figure.

Figure 0: Figure 1: Figure 2:

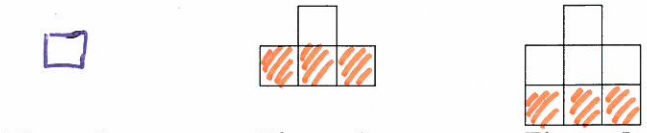
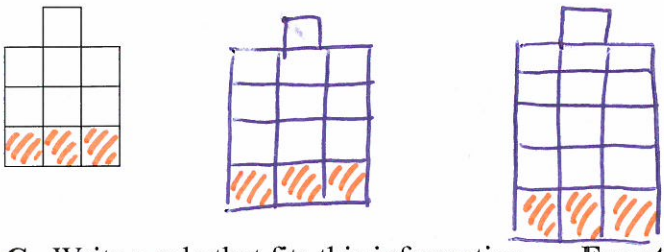


Figure 3: Figure 4: Figure 5:



C. Write a rule that fits this information. **Equation**: $y = 3x + 1$ (m = 3, b = 1)

B. Fill in the table using the information from the figures.

Figure #	Number of Tiles
0	1
1	4
2	7
3	10
4	13
5	16
x	

"begin" / starting point

+3 tiles

+3 tiles

+3 tiles

+3 tiles

+3 tiles

Figure 0 (initial/"begin"): 1*

Growth: 3*

$y = mx + b$

$y = 3x + 1$ ← b: "beginning" / "tiles at fig #0" / "y-intercept"

m: "growth" / "rate of change" (from one figure to the next ☺)