

Linear Patterns

- Linear functions take the form $f(x) = mx + b$, where m is the rate of change and b is the start.
- Find m by finding out how the pattern grows.
- Find b by finding out what Figure 0 would look like. (Fig. 0 is the start.)

Ex. 1

a. Find the pattern. Draw Figure 4.

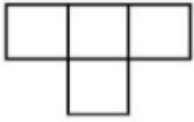


Figure 1



Figure 2

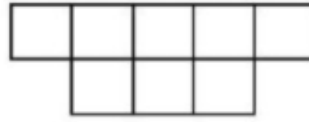


Figure 3

b. Explain how you see the figure growing. Share with your group/the class. Write at least TWO ways.

c. How many blocks would a Figure 0 have? Draw what you think it would look like.

d. Make an input/output table for the pattern. e. Write the linear function rule for the pattern.
 How many blocks in Fig. 10? Fig. 50?

Figure #	# of Blocks
0	
1	
2	
3	
4	
10	
50	

Use these patterns to answer the questions on the back of your Path to Success.

Pattern #1

Input is the Figure #. Output is the number of blocks.

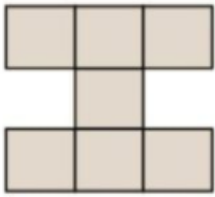


Figure 1

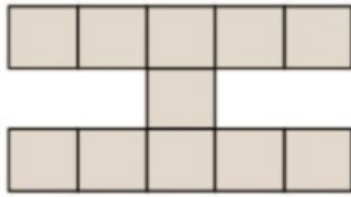


Figure 2

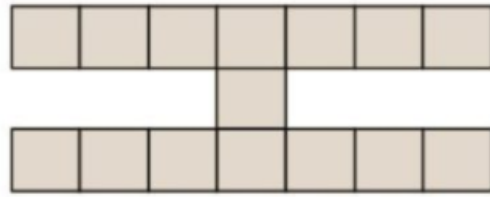


Figure 3

Pattern #2

Input is the Figure #. Output is the number of toothpicks.



Figure 1



Figure 2



Figure 3