

Name: _____

1. Complete the following patterns.

(a) 1, 5, 9, 13, , ,

(b) 2, 4, 8, 16, , ,

(c) 30, 25, 20, 15, , ,

(d) 128, 64, 32, 16, , ,

2. Use words and symbols to explain the patterns in each of the parts in question 1.

Example: 3, 6, 12, 24,
Answer: multiply by 2 ($\times 2$)

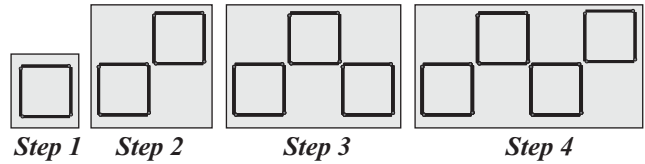
- (a) _____
- (b) _____
- (c) _____
- (d) _____

3. Find the next four numbers in the number patterns that have the following starting numbers and method of finding each number.

Example: 5 (+3)
Answer: 5, 8, 11, 14, 17

- (a) 1 ($\times 2$)
- (b) 5 (+6)
- (c) 25 (-4)
- (d) 324 ($\div 3$)

4. The following pattern is made using matches.



(a) Complete this table that shows the number of matches, m , for each step number, s .

s	m
1	
2	
3	
4	
5	
6	

(b) Complete the rule below that could be used to find the number of matches for a given step number.

$$m = \boxed{} \times s$$

(c) How many matches would be needed for step 12?

(d) What step number would have 40 matches?

5. Complete this table of values for the following rule:

$$m = s + 5$$

s	m
1	
2	
3	
4	
5	
6	

6. Complete the rule for this table of values.

$$m = \boxed{}$$

s	m
1	6
2	12
3	18
4	24
5	30
6	36