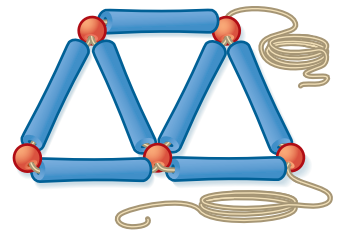


Frequently Asked Questions

Q: How can you extend a pattern?

A: You can make a model and then create a table.

For example, how many blue beads and red beads do you need to make six triangles? Model the first three triangles using blue beads and red beads or a sketch. Then extend your model. Count the total number of blue beads and red beads for each number of triangles to extend the pattern in the table.



Bracelet Pattern						
Number of triangles	1	2	3	4	5	6
Number of blue beads	3	5	7	9	11	13
Number of red beads	3	4	5	6	7	8

Q: How can you describe increasing and decreasing patterns?

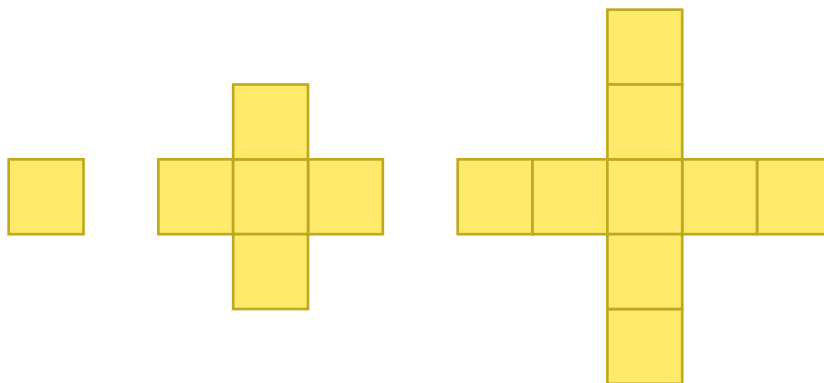
A: You can describe what number the pattern starts at and how the pattern continues.

For example, to describe the pattern 15, 21, 27, 33, 39, ..., you can say that the pattern starts at 15 and you add 6 each time.

Practice

Lesson 1

1. a) Sketch the next two shapes in the following pattern.



- b) Record the number of squares in each shape. Use a table.
c) What is the pattern rule?

Lesson 2

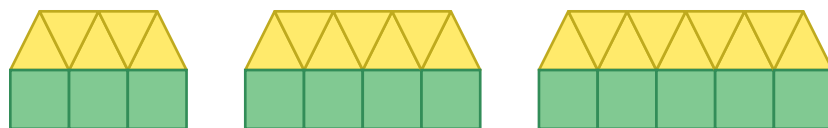
2. Jody has a recipe for modelling clay.
a) Copy and extend Jody's table to show the amount of each ingredient for one to five batches.



Number of batches	Flour (g)	Water (mL)	Salt (g)	Oil (mL)	Cream of tartar (mL)
1	150	300	75	15	10
2	300	600	150	30	20
3	450	900			
4	600				

- b) What is the pattern rule for the amount of water?
c) What is the pattern rule for the amount of oil?
d) Will the number 45 ever appear in the pattern for the amount of cream of tartar? How do you know?
e) How much of each ingredient does Jody need to make five batches of modelling clay?

3. Max made a table to show the number of triangles and the number of squares in these pictures.



picture 1

picture 2

picture 3

Triangle and Square Pattern				
Picture number	1	2	3	4
Number of triangles	5	7		
Number of squares	3	4		

- Continue the number patterns up to picture 4.
- What is the pattern rule for the number of triangles?
- What is the pattern rule for the number of squares?
- How many triangles and how many squares will be in picture 6?

Lesson 3

4. Silken was giving out cards to play a game. She had 56 cards, and she gave 7 cards to each player. She started this pattern to show what she did: 56, 49, 42, 35, ...
- Why do the numbers in Silken's pattern decrease by 7?
 - What is Silken's pattern rule?
 - Silken gave out all the cards. How many players were playing the game?

Lesson 5

5. a) Write the first 10 numbers for the following pattern rule:
Start at 1, and add 2 each time.
- b) Use a pattern to figure out the sum of the 10 numbers.