



G3.63 | IDENTIFY RULE & COMPLETE A GROWING PATTERN

Geometry & Measurement Concepts - NCERT Chapter 10: Play with Patterns (relevant section of the chapter only)

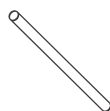
Students will be able to identify rules of growing geometric patterns & extend the pattern using the rules

40- 50 min

« PRE REQUISITES:

G3.62 Know how to complete a pattern by identifying the repeating unit within the pattern

✓ TLM



20 Straws/ Match sticks: 4 students

! MISCONCEPTIONS

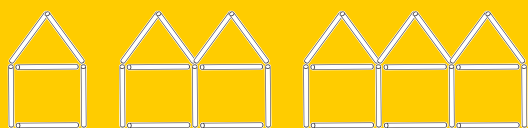
None

KEY VOCABULARY

None



PLAY



1- house

2- house

3- house

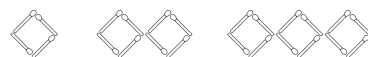
Observing Growing Patterns

○ Divide students in groups of 4 & distribute 20 straws/ matchsticks to each group

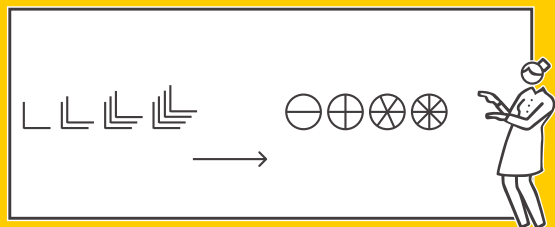
○ Make a pattern using the matchsticks as shown above. Tell students that the first pattern has 1 house, the second one has 2 houses, & the third one has 3

○ Ask students to replicate the 3 patterns & make the fourth pattern in this sequence

○ Show other growing patterns using matchsticks. Another example is shown below



PROCESS



Growing patterns & their rules

○ Draw L-shaped patterns on the board as shown. Tell the student that the first image has 1 L, the second one has 2 Ls, the third one has 3 Ls, & so on

○ Tell students that the next image in this sequence will have 4 Ls. Explain that patterns where one shape increases in no. are called growing patterns

○ Draw 4 Ls next to each other & explain that the pattern is not a growing pattern because each shape has the same no. of Ls

○ Draw a circle & divide into 2 parts. Draw a second circle & divide into 4 parts. Continue the pattern

○ Tell students that the pattern grows within the circle. Each image has more parts within the circle than its previous image

○ Explain that all growing patterns do not necessarily grow in size

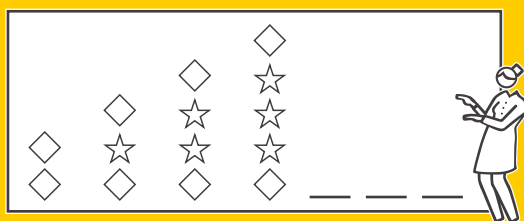
○ Point to the pattern of circles & tell that some patterns can be growing patterns even if their size remains the same

? QUESTION

How are growing patterns different from other patterns?



PRACTICE



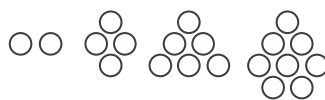
Draw the pattern on the blackboard & ask students to extend the pattern

○ Help students solve question 3 from the worksheet. Ask students to look at the pattern & draw the next shape in to extend the pattern

? QUESTION

How many stars did you draw in the next line? How did you know many many Stars to draw?

○ Help students solve question 4 from the worksheet. Ask students to look at the pattern & extend it



? QUESTION

Is this a growing pattern? How do you know?



G3.63 | EXTENDING GROWING PATTERN

WORKSHEET: GEOMETRY & MEASUREMENT CONCEPTS - NCERT CHAPTER 10: PLAY WITH PATTERNS (RELEVANT SECTION OF THE CHAPTER ONLY)

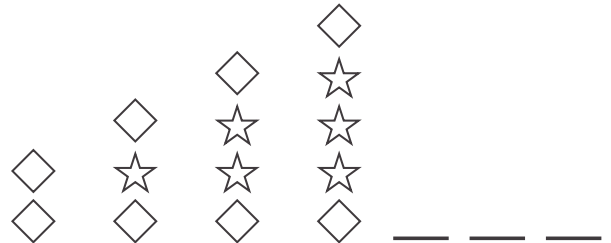
① SOLVED EXAMPLE : Circle the correct next step for the pattern shown below:

S.No.	Pattern	Next Step
1.		

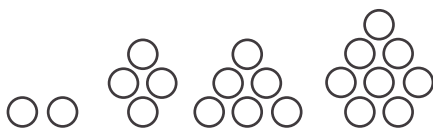
② Circle the correct next step for each pattern shown below

S.No.	Pattern	Next Step	Next Step
1.			
2.			

③ Look at the pattern & draw the next shape in to extend the pattern



④ Look at pattern & extend it



⑤ There is an error in both of these patterns. Circle the incorrect step & draw the correct step in the next column:



You can also make patterns using the alphabets. Here is one example

A, AA, AAA, AAAA,

Can you make some other growing patterns using alphabets