



# G3.62 | IDENTIFY REPEATING UNIT TO FINISH PATTERNS

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

Students will be able to complete patterns by identifying the repeating unit in a pattern

40- 50 min

PRE REQUISITES:

G3.61 Know how to identify base tile in a given tiling pattern

TLM



Match sticks- 40: 4 students

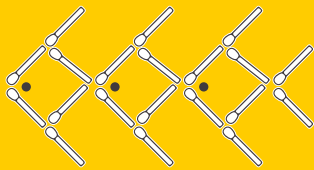
MISCONCEPTIONS

None

KEY VOCABULARY

None

## PLAY



Observing and extend the pattern by adding more matchsticks

○ Divide students in groups of 4. Distribute 40 match sticks to each group

○ Arrange the match stick in the pattern shown above. Make a small eye mark using a pen or a pencil

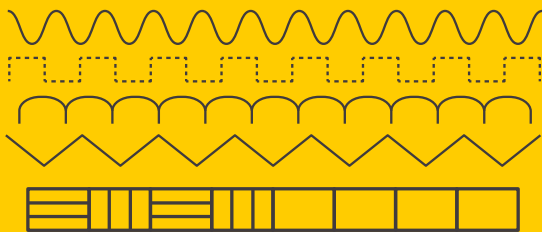
○ Ask the student to replicate the pattern

QUESTION

How many sticks will be required to make the fourth fish in this pattern?

○ Ask the students to extend the pattern to show a total of 6 fish

## PROCESS



Observe different types of patterns and identify their rules

○ Draw a few line patterns as shown above

○ Explain that each pattern looks different from the other because of how the lines have been drawn out

○ Point to the first pattern & explain that the line curves up & then curves down, then again curves. Explain that this pattern of curving up & down is repeated throughout the pattern

○ Point to the second pattern & explain that the line goes straight- then down-then straight-then up-then straight-then down again

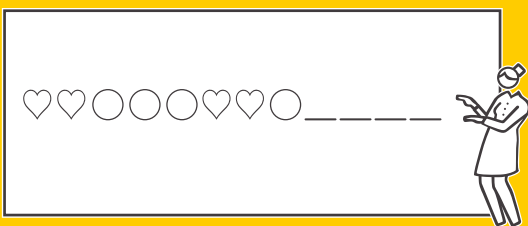
○ Similarly, tell the rules for third & the fourth line patterns

○ Draw a complex pattern with multiple lines, as shown above. Tell that patterns can also have more than one shape repeating one after the other

○ Explain that the first square has 2 sleeping lines & the second square has 2 standing lines, the third square has sleeping lines again

○ Emphasize that patterns follow rules in which shapes over & over again. Once we identify the rule, we can extend the pattern

## PRACTICE



Draw the pattern on the board & ask the student to extend it

○ Help the students solve question 3 from the worksheet. Ask the students to look at the patterns & extend them

♡♡○○○○♡♡○\_\_\_\_\_

○□○○□\_\_\_\_\_

QUESTIONS

Why did you draw a circle after the square? How did you know which shape to draw?

Can you think of a different pattern using squares & circles?

○ Emphasize that many different patterns are possible using the same shapes

○ Help the students solve question 4 from the worksheet. Ask the students to identify the correct shape to extend the pattern

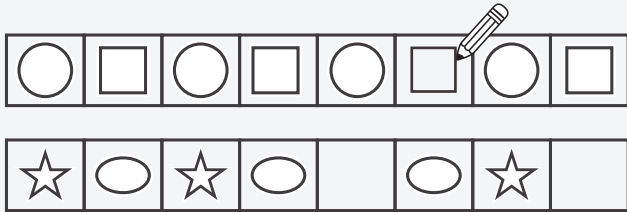




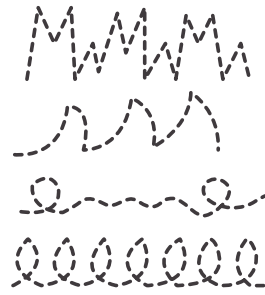
# G3.62 | REPEATING UNIT IN A GEOMETRIC PATTERN

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

- ① SOLVED EXAMPLE : Draw the missing shapes to complete the pattern



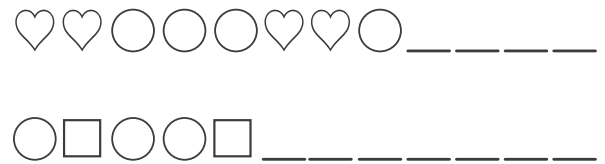
- ② Extend these line patterns



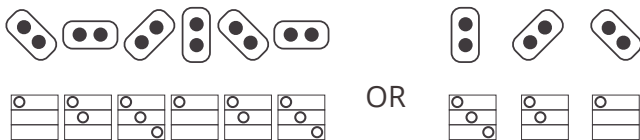
- ③ Which shape should be drawn next?

| S.No. | Pattern | What is next? |
|-------|---------|---------------|
| 1.    |         | _____         |
| 2.    |         | _____         |

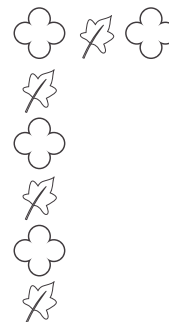
- ④ Extend these patterns



- ⑤ Select the correct shape to extend these patterns



- ⑥ Draw more flowers & leaves to complete the pattern on this bedsheet.



- ⑦ Draw a pattern of your choice on this t-shirt. Remember that a pattern must have some shape that is repeated over & over again.

