



G3.61 | COMPLETING PATTERN USING BASE TILE

Geometry & Measurement Concepts - NCERT Chapter 5: Shapes and Designs

Students will be able to identify the base tile in a given tiling pattern

40- 50 min

PRE REQUISITES:

G3.60 Know how to identify repeated units in a geometric pattern

TLM



Pictures of tiling patterns

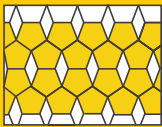
MISCONCEPTIONS

Students might have a misconception that base tiles must be placed in one orientation throughout the pattern

KEY VOCABULARY

Tiling

PLAY



The base tile blank grid of 10 by 3

○ Ask the students to think of tiled floors or walls & describe it

○ Allow the students to describe using known vocabulary like names of colors, shapes, orientations

○ Tell the students that you will draw a picture of a tiled wall

○ Draw a square grid on the blackboard & color it as shown above

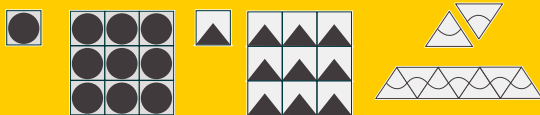
○ Ask the students to replicate the pattern in their notebooks using any two colors of their choice

QUESTION

Have you seen this pattern of tiles before?

○ Ask the students to draw any other type of tiling pattern they have seen before

PROCESS



Creating & extending tiling patterns

○ Draw a tiling pattern with a square-shaped base tile & circle drawn inside the square. Point to the base tile

○ Tell that the tile is used repeatedly to get the tiling pattern & that it has a circle drawn in a square as base tile

○ Point to the two tiling patterns & explain to the students that tiles come in various designs, sizes, shapes, & colors

○ Draw a tiling pattern with a triangular base tile & tell that tiles need not be square-shaped always

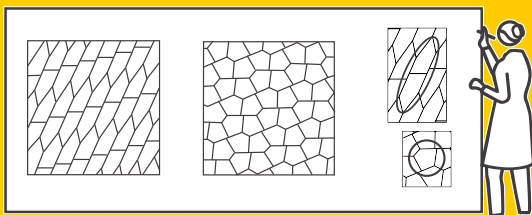
○ Draw the triangular base tiles in 2 different orientations

○ Tell that they can be placed in different orientations to create a pattern

○ It is not a pattern because there are gaps between tiles

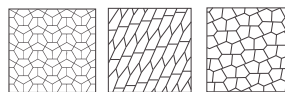
○ It can be completed by putting more tiles

PRACTICE



Show patterns on the black board and help students solve the questions

○ Help the students solve question 2 from the worksheet. Ask the students to observe the patterns & circle the base-tile in each:



○ Help the students solve question 4 from the worksheet. Ask the students to extend the following patterns by coloring the base tiles as shown:



○ Explain that tiles are usually placed such that there are no gaps between adjacent tiles

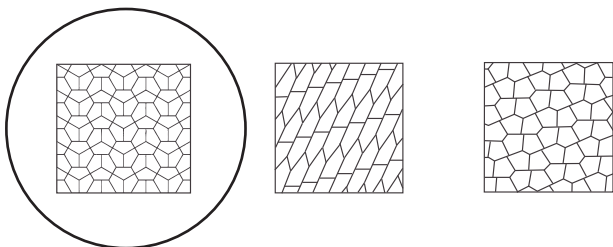
○ Draw triangles in the same orientation & point to the gaps between adjacent triangles. Emphasise that placing every alternate triangle upside down ensure there are no gaps between them



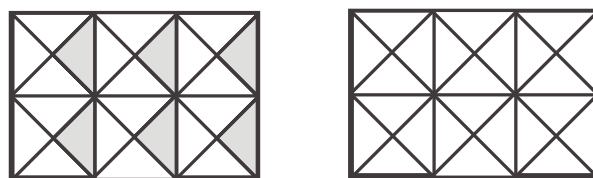
- ① SOLVED EXAMPLE : Extend the patterns by drawing & coloring shapes below the given row:

S.No.	Pattern
1.	
2.	

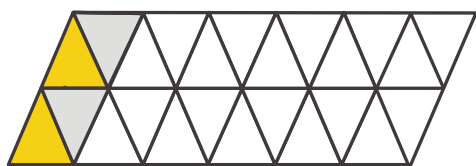
- ② Color the tiles that can fill a given floor without leaving any gaps



- ③ Draw the tiles which are used to make each of these patterns



- ④ Extend this tiling pattern by coloring the tiles



- ⑤ Extend the tiling pattern make drawing more tiles



These are tiles used in tilling the pavement of the roads. These tiles come in various designs & colors. Find out & draw any three more such tiling arrangements from your locality.

