SNBP International & Senior Secondary School, Chikhali, Pune.
Affiliation No. 1130703 Academic session 2024-25
CHAPTER 15 SHAPES AND PATTERNS NOTES
(PT3)

Class : III

SUBJECT : Maths

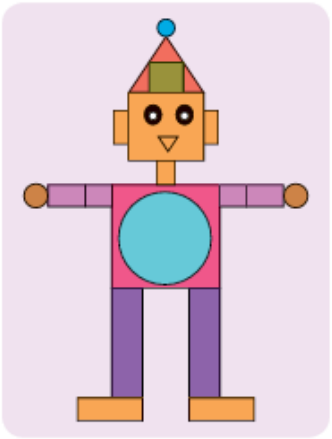
Prepared by: TEJALI GOTE L .No: 15

15 Shapes and Patterns

Let's Begin

Arav, look I have drawn a robot using several shapes.

It looks great, Rini.



Look at the picture of the Rini's robot. Fill in the blanks/boxes.

a. The hat of the robot is made up of ___triangle___, ___circle___, and ___square___. (rectangle, circle, star, triangles, squares, and oval)

b. The face of the robot has 5 circles, 2 triangles, 2 rectangles, and 2 square.

c. The hands of the robot are made up of ___circle___, ___square___, and ___rectangle___.

d. The legs of the robot are made up of ___rectangle___.

e. The stomach of the robot is made up of 1 ___square___ and 1 ___circle___.

Concrete Stage

Use 'Shapes & Colour Kit' to answer the following questions.

a) In a rectangle, the ___2___ sides are equal.

b) ___Pentagon___ and ___Hexagon___ are two polygons that have more than 4 sides.

c) ___Cube___ and ___Cuboid___ have 6 faces.

d) Tick (✓) the shapes that have one curved face.

Sphere	Cylinder	Cone	Cube
✓	✓	✓	

e) Tick (✓) the shapes that have 8 vertices.

Cube	Square	Hexagon	Cuboid
✓			✓

Pictorial Stage

1 **Observe the 2D shapes, and name them. Count and write the number of sides and vertices.**

a 

Quadrilateral

Number of sides 4

Number of vertices 4

b 

Hexagon

Number of sides 6

Number of vertices 6

c 

Pentagon

Number of sides 5

Number of vertices 5

2 **Identify the shapes and fill in the blanks.**

a The cylinder has 1 curved face(s) 2 flat face(s).

b The cone has 1 curved face(s) 1 flat face(s).

c The sphere has 1 curved face(s) 0 flat face(s).

Abstract Stage

1 **Identify the shapes. Count and state how many of each type are there.**

Triangles	Quadrilaterals	Pentagons	Hexagons
3	5	1	2

2 **Complete the table.**

Object	Name of the shape	Number of faces	Number of edges
	cylinder	2 flat and 1 curved	2
	cube	6 flat	12

Worksheet 15.1

Concrete Stage

Hintometer: Number of vertices is equal to the number of sides for all 2D shapes.

Use 'Dot Grid/Geo Board' to complete the table.

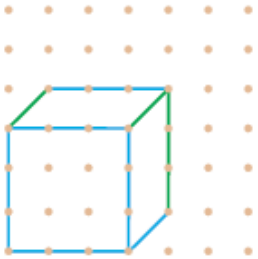
Shape	Number of sides	Number of vertices
Quadrilateral	4	4
Triangle	3	3
Pentagon	5	5
Hexagon	6	6

Pictorial Stage

1 Complete 3D shapes on the given dot grids, and name them.

a 

Cone

b 

Cube

2 Match the objects with the shapes they represent.

a 

b 

c 

d 

i. Cube ii. Cylinder iii. Cone iv. Sphere

Abstract Stage

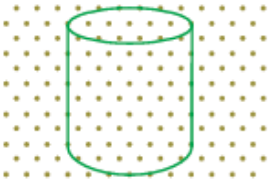
1 Connect the highlighted vertices below to form shapes.

triangle

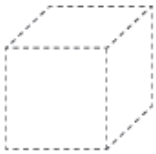
pentagon

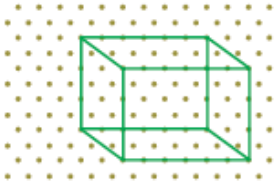
2 Trace the 3D shapes then draw them on the given isometric dot grids.

a



b



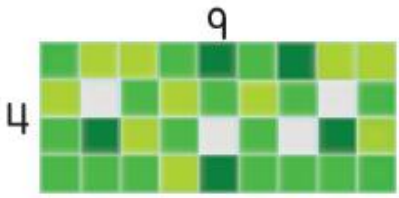


c

Abstract Stage

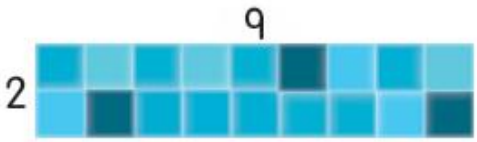
1 Check the tiled wall that has an area of 36.

a

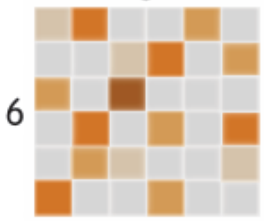


✓

b

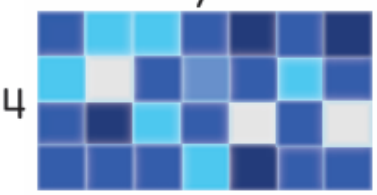


c



✓

d



2 Tick (✓) the figures that can be formed using tangrams.

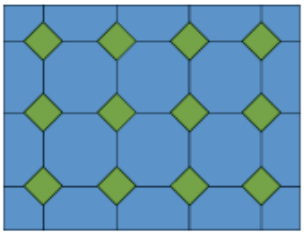
✓ | | ✓ | | ✓ |

Linking Chain Art

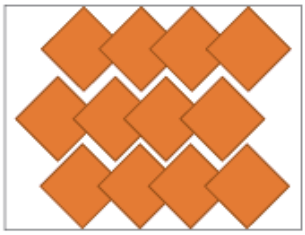
Worksheet 15.2

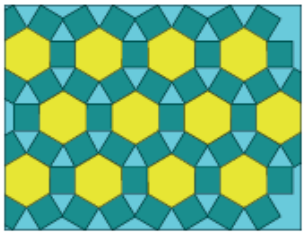
Tessellations cover a flat surface with no overlaps or gaps.

Observe the figures. Tick (✓) the boxes for the figures showing tessellations.

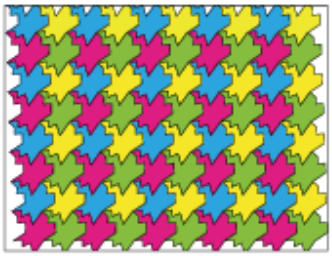


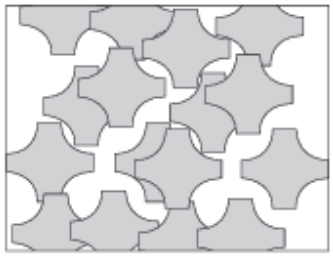
✓

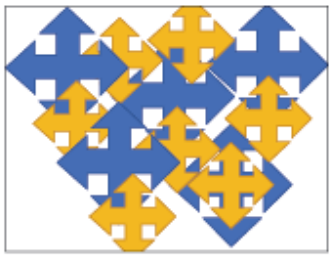


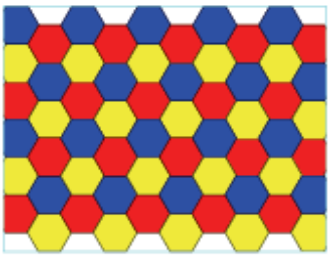


✓





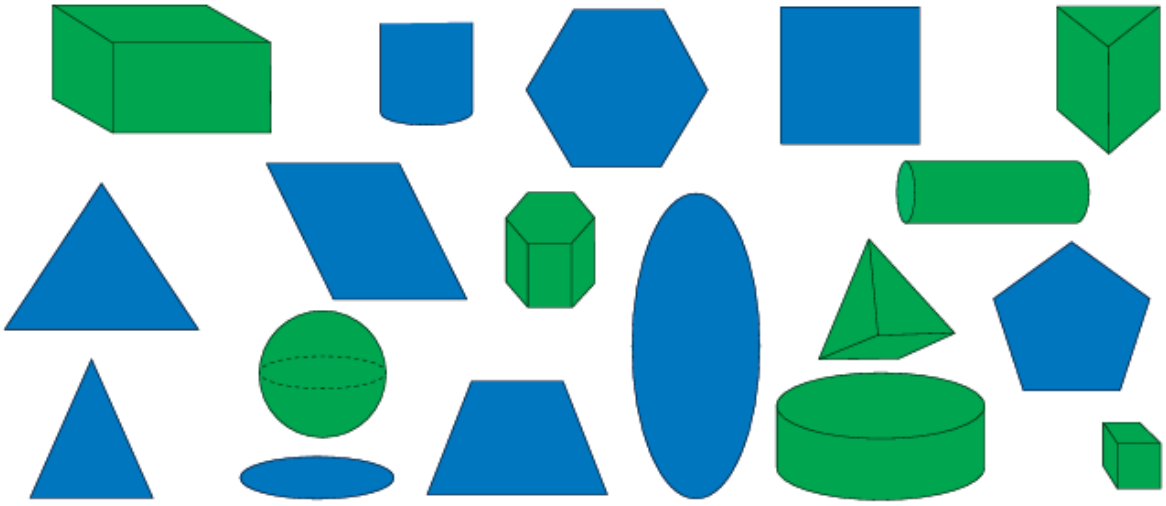




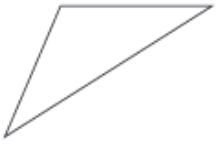
Now create your own tessellation using 2 different shapes, and colour your art work.

Blooming Questions

1 Identify 2D and 3D shapes. Colour 2D shapes blue and 3D shapes green.

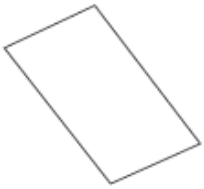


2 How many acute and obtuse angles are there?
Use a set square to check. Write A for acute angles and O for obtuse angles.

a  A = 2 O = 1

b  A = 1 O = 1

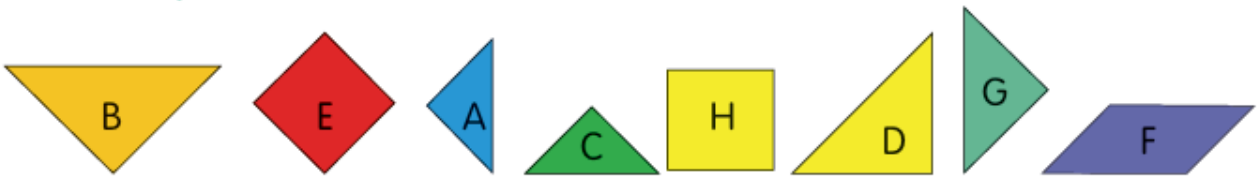
c  A = 2

d 

e  A = 2 O = 2

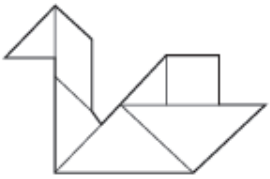
f  O = 2 A = 2

5 **Complete the tangram puzzles by colouring them. Write the correct alphabet on each shape.**



a 

VASE

b 

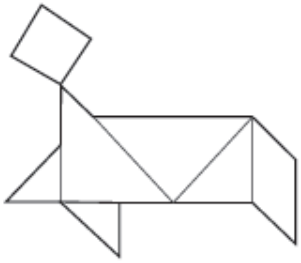
SWAN

c 

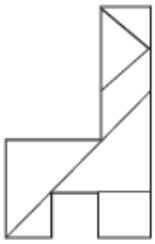
MOUNTAIN

d 

FISH

e 

SEAL

f 

CHAIR

Answer: Answer may vary.

6 **Complete the shape and name it. Draw two 2D shapes that have more than 4 sides and 4 vertices.**

Answer: Answer may vary.

Mental Maths

Draw the following shapes

a A triangle with 3 acute angles.

b A pentagon with an acute angle.

c A shape with 2 right angles, one acute angle, and one obtuse angle.

Answer: Answer may vary.

POST -ACTIVITY -

Finish each pattern by drawing the shape that comes next.

1)  _____ _____

2)  _____ _____

3)  _____ _____

4)  _____ _____

5)  _____ _____

6)  _____ _____

SUB TR: HOD: COORDINATOR: PRINCIPAL: