

1.1 Properties of 2D Shaped objects

Let us learn the names of 2D shapes.

Look at the picture and identify the shapes.



۲





Make the children into groups of 3 or 4 and ask them to form different shapes.





()





 (\bullet)

Quadrilateral С All closed four sided figures are called 1. D quadrilaterals It has four sides (AB,BC,CD,DA), four 2 vertices (A,B,C,D) and two diagonals (AC,BD) Β Square A square has four equal sides (PQ=QR=RS=SP), four vertices (P, Q, R, S) and two diagonals (PR, QS). The diagonals of a square are equal in length (PR = QS). Examples Q Carom board Chess board One face of the dice Rectangle Ζ A rectangle has four sides (WX, XY, YZ, ZW) and four vertices (W, X, Y, Z). It has two equal diagonals (WY = ZX) and opposite sides are equal (WX = YZ ; XY = WZ). Examples Ο Rhombus Black Board Mat A rhombus has four equal sides N (LM = MN = NO = OL), four vertices (L, M, N, O) and two diagonals (LN, MO). The diagonals are not equal in length M Examples Kite Tile













 $\mathbf{\bullet}$



. 10

 (\bullet)



B. Solve the following.

- 1. A side of a square-shaped sandbox in Gandhi Park measures 30 cm. Determine the perimeter of the sandbox.
- 2. Find the perimeter of a rectangle, whose sides are 12 cm and 8 cm.
- 3. Find the perimeter of the triangle, whose sides are 13 cm, 5 cm and 14 cm.
- 4. The adjacent sides of a parallelogram are 6 cm and 7 cm. What is the perimeter of the parallelogram?
- 5. The sides of a trapezoid measures 8 cm, 7 cm, 4 cm and 5 cm respectively. What is the perimeter of the trapezoid?

1.2 Creating objects by combining different 2D shapes

1.2.1 Uses of tangram in combining different 2D shapes.

Tangram is a thousand years old Chinese puzzle consisting five or seven geometrical pieces called tans put together to form different pictures.









()



S.No.	Shape of the tile	Number of tiles	Does it exactly fits the space?
1.	Triangle (4cm, 5cm, 5cm)	2	no
2.	Rectangle (3cm, 6cm)	30	yes
3.	Rectangle (6cm, 5cm)		
4.	Square (side 6cm)		
5.	Rectangle (5cm, 12cm)		
6.	Rectangle (6cm, 18cm)		
7.	Rectangle (3cm, 12cm)		
8.	Triangle (3cm, 4cm, 5cm)		

1.3 Properties of 3D objects

Create 3D objects using clay and paper folding.

A figure that you can cut and fold to make a model of a solid shape is called a net. Nets are used to make floor maps of houses, layout planes of buildings, bridges and so on.





 (\mathbf{A})

 (\bullet)







Compare and differentiate 2D and 3D objects.			
Concept	2D	3D	
Expansion	Two dimension	Three dimension	
Dimensions	Length and breadth	Length, breadth and height.	
Examples	Square, rectangle, circle, triangle, rhombus, parallelograms, trapezium and quadrilateral	Cube, cuboid, cone, cylinder and sphere.	

Find out 2D and 3D objects from the given pictures.



۲