

Part One



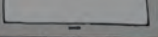
Introduction to Geometrical Figures

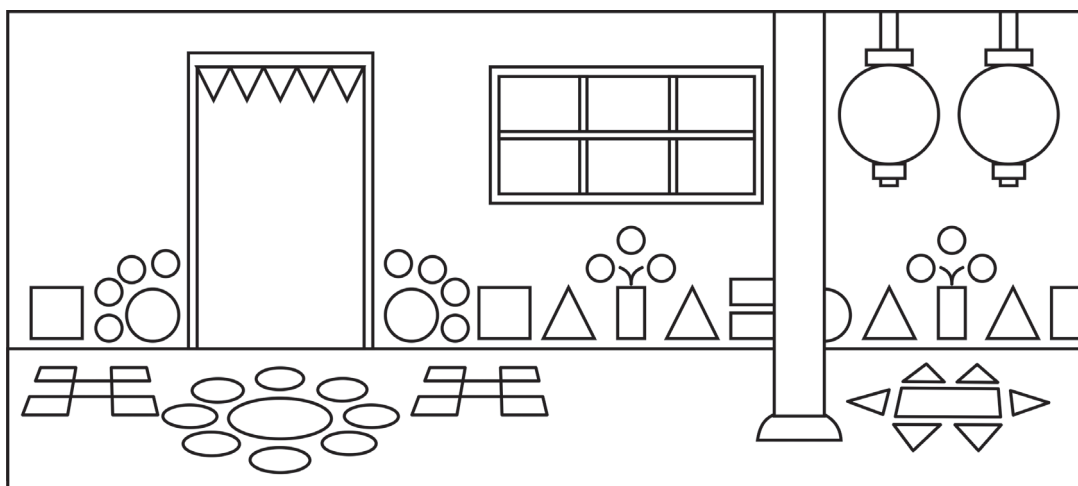
Revision

■ Quadrilateral, Triangle, Circle

Quadrilaterals	Triangles	Circles
		

◆ Look at the pictures below. Identify the geometrical figure. Draw it and write its name.

Picture					
Figure					
Name of the Figure	Rectangle				



◆ Identify the triangles, circles and quadrilaterals in the picture above. Colour the triangles red, the quadrilaterals blue and the circles yellow.

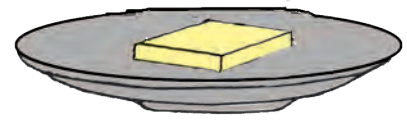
 **For teachers :** Cut cardboard into the shapes given above and various other shapes too, and place them on the table. Have the children classify them into triangles, rectangles, squares and circles. Point out that some of the shapes cannot be classified into any of the given categories.

Edges and Corners

Look at this piece of *barfi*.

It is a quadrilateral.

A quadrilateral has four edges and four corners.



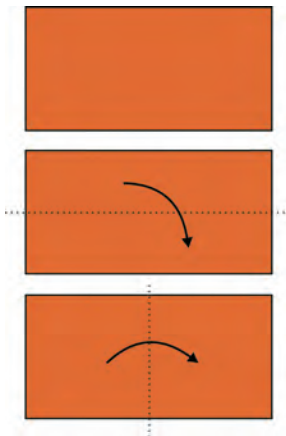
Observe the surface of a table.

- ◆ How many edges does the surface have ?
- ◆ How many corners does the surface have ?
- ◆ What is the shape of the surface of the table ?



Rectangle

Take a rectangular sheet of paper as shown below.



- ◆ How many edges and how many corners does a rectangle have ?

Now, let us fold the paper in the middle to bring the opposite edges together.

What do we see ?

The longer side falls exactly on the opposite side.

The shorter side falls exactly on the side opposite, too.

The opposite sides of a rectangle are of equal length.

Square

Take a look at a handkerchief. It is a square.

- ◆ How many edges and corners does a square have ?

Fold the handkerchief in the middle from top to bottom as well as from side to side to see if the opposite sides are of equal length.

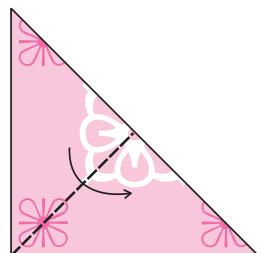
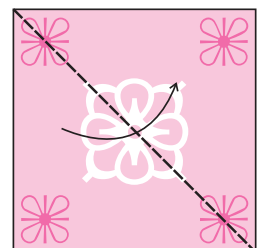
Now, we shall fold the handkerchief as shown alongside to find out if each corner falls exactly on the one opposite.

The corners match and so do the edges that make them up.

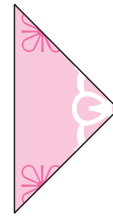
Now fold the handkerchief over again.

All the edges match in length.

All the edges of a square are of equal length.



Note that we got a triangle when we folded the handkerchief.



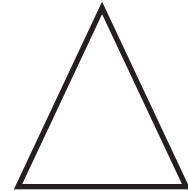
■ Triangle

- ◆ How many edges does a triangle have ? How many corners ?

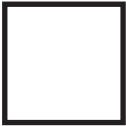
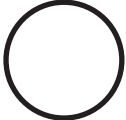
Find this shape in your surroundings.

- ◆ Use sticks to make the following shapes.

Quadrilateral, rectangle, square, triangle



- ◆ Complete the table below.

Figure	Name of the figure	Number of edges	Number of corners
			
			
			
			
			

 **For teachers :** Cut out shapes of rectangles, squares, triangles and circles from coloured paper. Tell the children to examine them for their properties. Point out that the edge of a circle is curved and that the circle has no corners.

■ How to make a five-piece Tangram

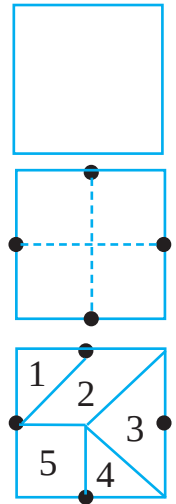
Take a square piece of paper.

Find the centre of the paper by folding it twice.

Also, mark the centres of all the four edges.

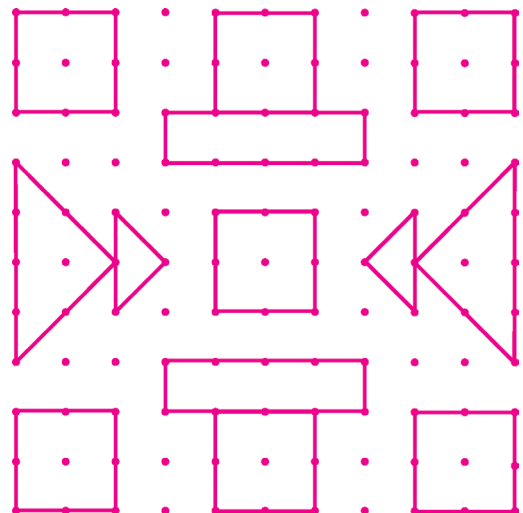
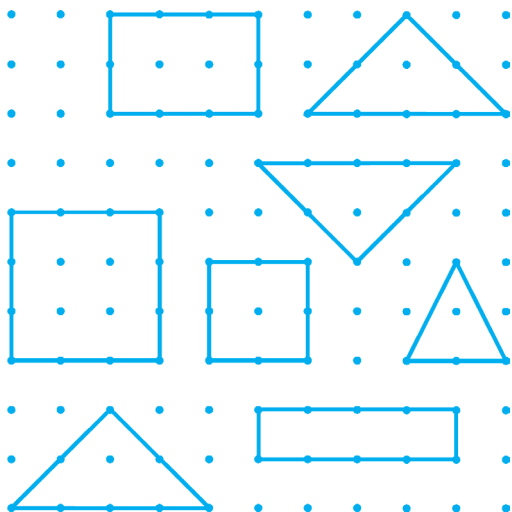
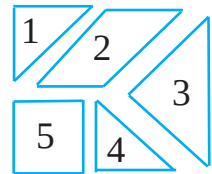
Draw lines to join the centres of the sides and the centre of the square as shown in the picture.

Now, make five pieces of the square by cutting along the lines as shown in the picture.



■ Using the tangram here, answer the following questions.

- ◆ How many triangles are there in your tangram ?
- ◆ Are all the triangles alike ?
- ◆ Can we join two of the triangles to make a square ?
- ◆ Can we join two of the triangles to make a big triangle ?
- ◆ How many squares are there in this tangram ? How many quadrilaterals ?
- ◆ In the picture below, identify the figures drawn on the dotted paper. Colour the triangles red, squares blue and the rectangles green.



 **For teachers :** Tell the children to use string to make shapes of circles, rectangles, squares and triangles. Encourage the children to design many different tangrams and to obtain a variety of figures from them.