NCERT Solutions for 3rd Class Maths: Chapter 5-Shapes and Designs

Class 3: Maths Chapter 5 solutions. Complete Class 3 Maths Chapter 5 Notes.

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NCERT 3rd Maths Chapter 5, class 3 Maths Chapter 5 solutions

Have Fun with Shapes

1.How many triangles are there in the following figures?

Ans. (a) There are 8 triangles in figure (i)

(b)There are 8 triangles in figure (ii)

(c)There are 9 triangles in figure (iii).

2.Find the biggest rectangle in the figures given below:

Ans. Biggest rectangles in the figures are shown enclosed in thick lines.

Edges and Corners

1.(a)Looking at the picture given above, can you tell who is out?

(b)Where is Guddu standing?

(c) Can this game be played around a round table? Why?

Ans. (a) Guddu is out as she is not at a comer of the table.

(b)Guddu is standing against the edge of the table.

(c)No, this game cannot be played around a round table as it has no corners.

2.(a) Look around you and identify things with straight and curved edges?

(b)Do the things with straight edges have corners?

(c)Do the things with curved edges have corners?

(d)Try to find things which have both straight and curved edges.

Ans. (a) Following things have straight edges; picture, book, door, newspaper, blackboard.

Following things have curved edges; ball, grapes, apple, lemon, coconut.

(b)Yes, things with straight edges have comers.

(c)No, things with curved edges have no corners.

(d)Following things have both straight and curved edges; bread, violin, electric guitar, car, screw-driver.

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Activity Time

1.Take a rectangular sheet of paper.

2.Count its corners.

3.Now fold one of its corners.

(a)How many corners does it have now?

(b)How many comers will you get by folding?

(i)2 cpmers, (ii) 3 comers, (iii) 4 corners.

(c)Can you fold this paper in such a way that it has only three comers? You are allowed only two folds. What shape will you get?

4.Repeat the activity with a square sheet of paper.

5.Can you fold all the corners of the square sheet in such a way that the number of corners remains unchanged?

Ans. 1.Do as directed.

2.There are four corners.

3.(a) Five comers.

(b)(i) 6 comers, (ii) 7 comers, (iii) 8 corners.

(c)Yes, it can be folded to have three corners by folding it twice. The shape thus obtained is a triangle.

4.Do as directed.

5. Yes, all the corners of the square sheet can be folded in such a way that the number of corners remains unchanged.

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2.

Look at the following table and tick (✓) the names of things that have corners. Also count the number of edges and corners in each of them.

Name of things	Whether it has corners	Number of edges	Number of corners
(i) Die	Yes		8
(ii) Ball			
(iii) Eraser			
(iv) Egg			
(v) Sheet of paper			

Ans.

Things having corners are shown as ticked (✓) and complete table is as follows:

Name of things	Whether it has corners	Number of edges	Number of corners
(i) Die	Yes	12	8
(ii) Ball	No	Zero	Zero
(iii) Eraser	Yes	12	8
(iv) Egg	No	Zero	Zero
(v) Sheet of paper	Yes	4	4

3.

In the following figures, tick (✓) those which have corners. Do these figures have curved lines?

Ans. Yes, these figures have curved lines also.

4.Using only straight lines, can you draw a figure which has no corners?

Ans. No, we cannot draw a figure which has no corners; using straight lines.

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Tangram

1.How many triangles do you have in your set? Are all of them equal in size? Find

If out.

Ans. There are three triangles in the set. No, all of them are not equal in size. These triangles are numbered as 1, 2, 3, 4 and 5 in the tangram.

2.Use the two small triangles in the tangram set to get the following shapes:

(1)   (2)   (3)

Ans. The given shapes can be made as under by using two small triangles numbered 2 and 5 in the tangram are shown below:

(i)   (ii)   (iii)

3.Which two pieces of the tangram set are exactly same? Find out.

Ans. The two pieces numbered 2 and 5 of the tangram set are exactly same.

4.Find matching sides among the following pairs of pieces:

(a)Pieces 1 and 2 (b)Pieces 2 and 4

(c)Pieces 1 and 5 (d)Pieces 2 and 5

Ans. (a) Longest side of piece 2 with the smaller side of piece 1.

(b) Smaller side of piece 2 with smaller side of piece 4 and longest side of piece 2 with longest side of piece 4.

(c)Longest side of piece 5 with the smaller side of piece 1.

(d)Longer side of piece 2 with the longer side of piece 5 and smaller side of piece 2 with the smaller side of piece 5.

The 7-piece Tangram

Here is the picture of a seven-piece tangram.

You can cut out these pieces and put them together in different ways to make some very interesting shapes.
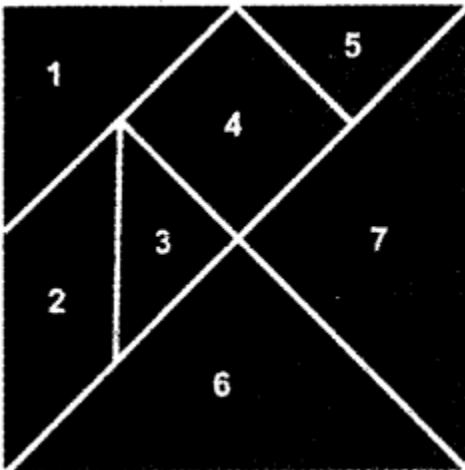
Try making these shapes:

1.Now try making the following shapes using only the pieces written here:

(*i*) **Use only triangles**

(*iii*) **Use only two triangles**

(*ii*) **Use pieces 1, 2, 3 and 5**

(*iv*) **Use pieces 1, 2, 3, 4 and 5**

Ans. Shapes using the desired pieces are shown against them as under:

(*i*) **Using only triangles**
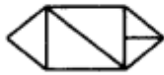
(*iii*) **Using only two triangles**
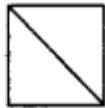
(*ii*) **Using pieces 1, 2, 3 and 5**

(*iv*) **Using pieces 1, 2, 3, 4 and 5**
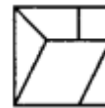
Weaving Patterns

Golu and Binu went to the market with their aunt. They saw many rugs (durries).

1.Which geometrical shapes can you identify in these borders? Draw them in your notebook.

Ans. The geometrical shapes used in these borders are:

(i) Arc

(ii) Circle

(iii) Concentric circle
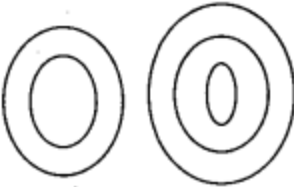
(iv) Parallelogram

(v) Square

(vi) Regular Hexagon

(vii) Hexagons
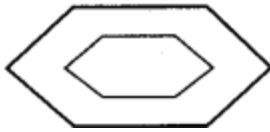
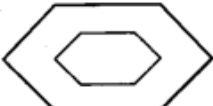**2.Is any shape repeating in a particular pattern? Which ones?**

Ans. Yes, many shapes are repeating in a particular manner such as:

(i) In first pattern ⬭ and ◇ are repeated alternately.

(ii) In second pattern ⊞ and ⬡ are repeated alternately.

(iii) In third pattern ⬭ and ⬭ are repeated alternately.

(iv) In fourth pattern ⬡ and ⬡ are repeated alternately.

3.Are the shapes made of

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**(i) Curved lines (ii) Straight lines**

(iii) Both curved and straight lines.

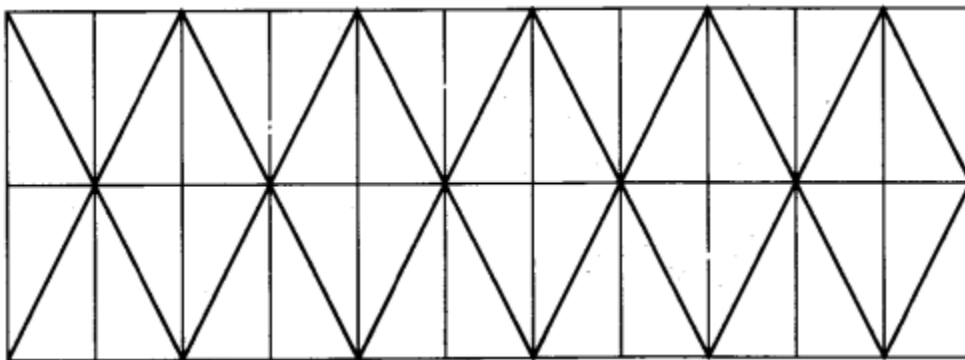**Ans.** Shapes are made of both curved and straight lines.

4.Look at your cloths, your mother's saris/shawls, rugs and mats. Can you identify some patterns? Draw them in your notebook.

Ans. Make two or three designs which usually appear on cloths, your mother's saries/ shawls, rugs and mats.

**5.Complete the following tiling pattern.**
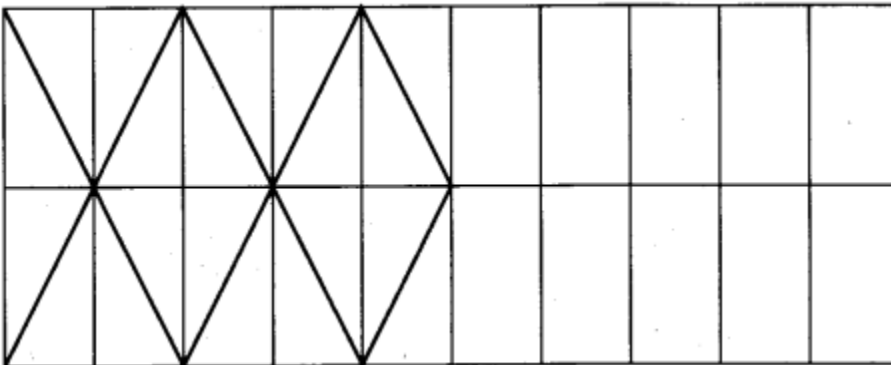
Ans. Complete pattern is as under:

6.Complete this pattern. Compare it with the pattern on page 70 which also uses six sided shapes. What is the difference between the two?

Ans. Here hexagons are interconnected with each other sides directly whereas here two triangles appear between the hexagons.

7.Khushboo and Hariz live in Agra. One day they went to see the Taj Mahal. The floor had the pattern shown below:
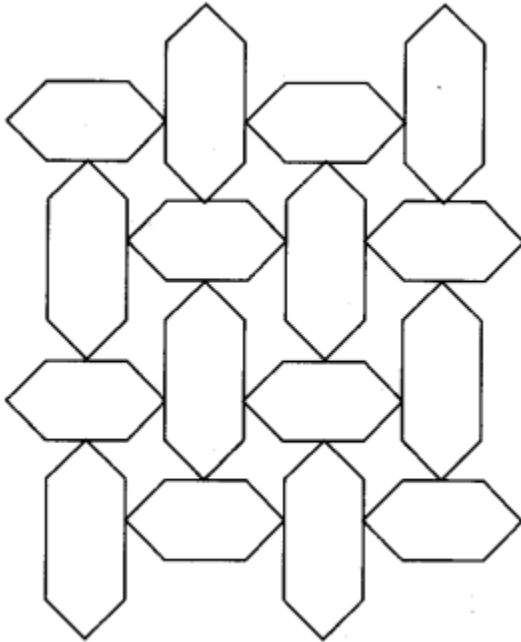
What do you think? Discuss with your friends.

Ans.I think only one type of tile has been used but their placements differ.

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