



MATHS

NCERT - NCERT MATHS(TELUGU)

UNDERSTANDING 3D AND 2D SHAPES

Exercise

1. What is the shape of the face of a cube?



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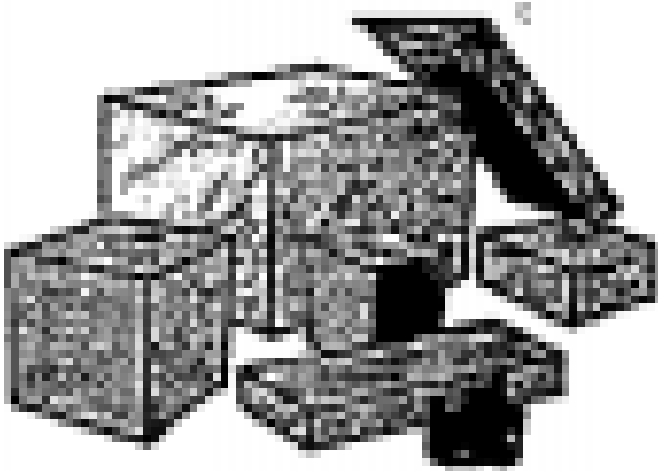
2. What is the shape of the face of a cuboid?



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3. Ramesh has collected some boxes in his room. Pictures of these are given here. How

many are cubes and how many are cuboids?



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4. Ajith has made a cuboid by arranging cubes of 2 cm each. What is the length, breadth and height of the cuboid so formed?

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5. Fill the table accordingly.

S.No.	Object	Shape	Slides only	Roll only	Slides & Rolls
1.	Cell	Cylindrical	×	×	✓
2.	Ball				
3.	Oil can				
4.	Biscuit packet				
5.	Coin				
6.	Marble				
7.	Orange				

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6. What is the difference between a cylinder and a cone with respect to the number of faces, vertices and edges ?



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7. A triangular pyramid has a triangle at its base. It is also known as a tetrahedron. Find the number of Faces : _____.



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8. A triangular pyramid has a triangle at its base. It is also known as a tetrahedron. Find the number of Edges : _____



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9. A triangular pyramid has a triangle at its base. It is also known as a tetrahedron. Find the number of Vertices : _____



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10. A square Pyramid has a square at its base. Find the number of Faces : _____



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11. A square Pyramid has a square at its base.

Find the number of Edges : _____



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12. A square Pyramid has a square at its base.

Find the number of Vertices : _____



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13. Fill the table

Shape	No. of curved surfaces	No. of plane surfaces	No. of vertices
			
			
			



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14. A triangular prism is often in the shape of a Kaleidoscope. It has triangular faces. No. of triangular Faces : _____ No. of

rectangular Faces : _____ No. of Edges :
_____ No. of Vertices : _____



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15. Draw ten polygons with different shapes in your note book.



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16. Use matchsticks or broom- sticks and form closed figures using six sticks In which case

was it not possible to form a Polygon ? Why ?



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17. Use matchsticks or broom- sticks and form closed figures using five sticks In which case was it not possible to form a Polygon ? Why?



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18. Use matchsticks or broom- sticks and form closed figures using four sticks In which case

was it not possible to form a Polygon ? Why ?



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19. Use matchsticks or broom- sticks and form closed figures using three sticks In which case was it not possible to form a Polygon ? Why ?



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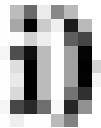
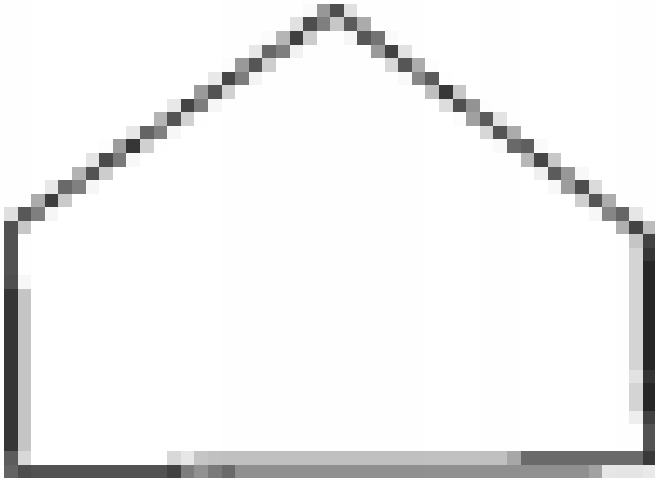
20. Use matchsticks or broom- sticks and form closed figures using two sticks In which case

was it not possible to form a Polygon ? Why ?



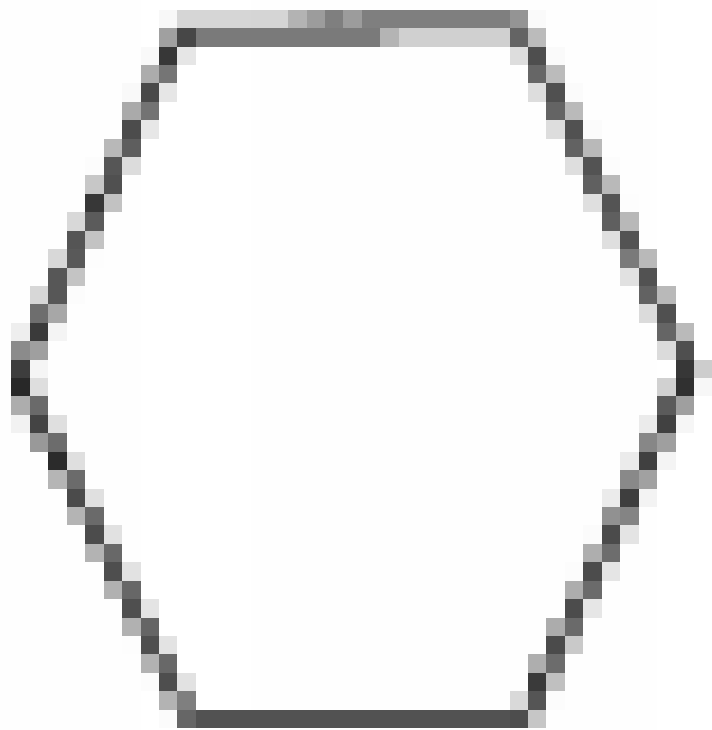
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21. Count the number of sides of the polygons given below and name them.



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22. Count the number of sides of the polygons given below and name them.

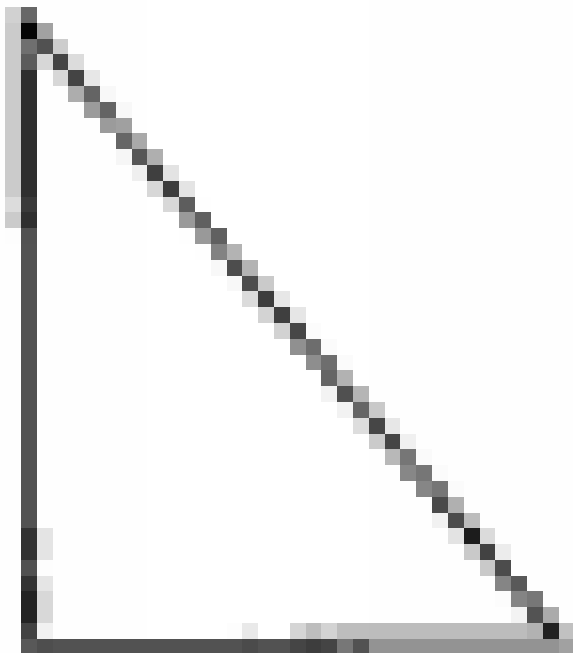


iii



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23. Count the number of sides of the polygons
given below and name them.



(iv)



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24. Fill in the blanks : The shapes spread in two directions only are called _____.



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25. Fill in the blanks : The number of edges the cuboid has _____.



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26. Fill in the blanks : Tube light is in the shape of _____.



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27. Fill in the blanks : The heap of grain is the shape of _____.



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28. Fill in the blanks : The faces of the pyramid are in _____ shape.



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29. A closed figure which has five sides is called _____.

A. A. quadrilateral

B. B. Septagon

C. C. Pentagon

D. D. Octagon

Answer:



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30. The example of regular polygon _____.

A. A. scalene triangle

B. B. equilateral triangle

C. C. Rectangle

D. D. None

Answer:



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31. The shape of the Earth is _____.

A. A. Cylindrical

B. B. Conical

C. C. Pyramidal

D. D. Spherical

Answer:



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32. The number of sides in octagon are
_____.

A. 8

B. 9

C. 6

D. 7

Answer:



33. If we cut a lemon into half, then we get the shape _____.

- A. Sphere
- B. Hemisphere
- C. Cylinder
- D. Pyramid

Answer:



34. State whether the following state ments
True/False : square is a 3-D shaped object.



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35. State whether the following state ments
True/False : The base of a cylinder is a circle.



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36. State whether the following state ments
True/False : A tetrahedron is also called a
triangular Pyramid.



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37. State whether the following state ments
True/False : A triangular prism has two
rectangular faces.



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38. State whether the following state ments
True/False : A polygon must have atleast three
sides.



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39. Define 2-D and 3-D shapes 7 Give examples?



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40. Ajith has made a cuboid by arranging cubes of 2 cm each. What is the length, breadth and height of the cuboid so formed?



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41. Fill the table accordingly.

S.No.	Object	Shape	Slides only	Roll only	Slides & Rolls
1.	Road Roller	cylindrical			
2.	Water Melon	Spherical			
3.	Carroms striker	Cylindrical			
4.	Mathematical Instrument Box	Cuboid			
5.	Text Book	Cuboid			
6.	A piece of waterpipe	Cylindrical			



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42. Draw the following figures of regular polygons: Regular Pentagon



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43. Draw the following figures of regular polygons: Regular Hexagon



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44. Draw the following figures of regular polygons: Regular Septagon



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45. Draw the following figures of regular polygons: Regular Octagon



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46. Define Regular Polygon ? Explain with two examples?



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47. Draw different types of prisms?



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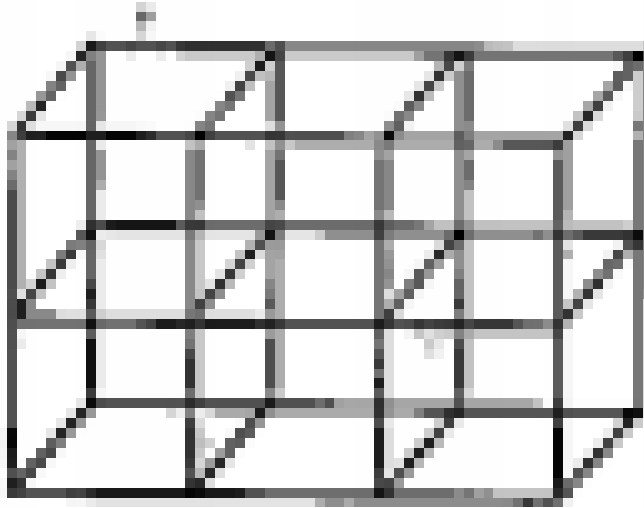
48. Give some examples of curved surfaces and plane surfaces.



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49. Dheeraj has a made a cuboid by arranging cubes of 3 cms each. Find the length, breadth

and height of the following figures.



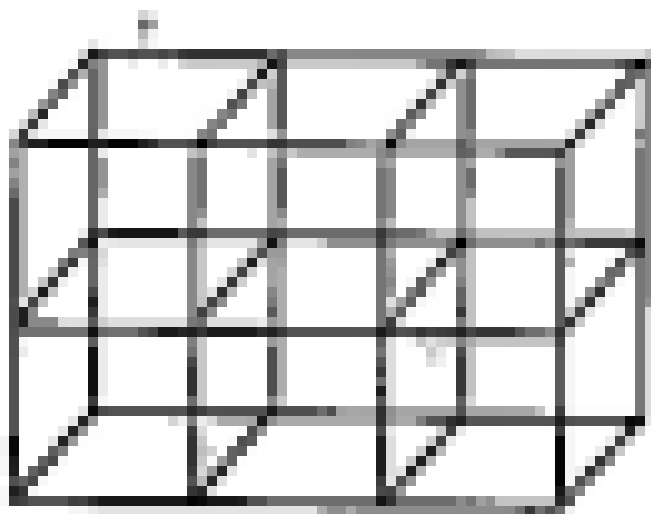
i)

1



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50. Dheeraj has made a cuboid by arranging cubes of 3 cms each. Find the length, breadth and height of the following figures.



i)

1



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51. If 3 cubes of 2 cm each are arranged side by side, then the length of the cuboid is _____ times to the length of the cube.



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52. A box is in the shape of cuboid and its dimensions are $6\text{cm} \times 4\text{cm} \times 2\text{cm}$. How many small cubes of each of size 2 cm can be arranged in the box.



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