1. Match the shape with the name:

2. Can this be a net for a die? Explain your answer.

3. The dimensions of a cuboid are $5 \mathrm{~cm}, 3 \mathrm{~cm}$ and 2 cm . Draw three different isometric sketches of this cuboid.
4. Three cubes each with 2 cm edge are placed side by side to form a cuboid. Sketch an oblique or isometric sketch of this cuboid.
5. If two cubes of dimensions 2 cm by 2 cm by 2 cm are placed side by side, what would the dimensions of the resulting cuboid be?
6. Two dice are placed side by side as shown: Can you say what the total would be on the face opposite to (a) $5+6$ (b) $4+3$ (Remember that in a die sum of numbers on opposite faces is 7 )
7. What cross-sections do you get when you give a (i) vertical cut (ii) horizontal cut to the following solids? (a) A brick (b) A round apple (c) A die (d) A circular pipe (e) An ice cream cone
8. For given solid, draw the top view, front view and side view.

9. For given solid, draw the top view, front view and side view.

10. For given solid, draw the top view, front view and side view.

11. For given solid, draw the top view, front view and side view.


A brick
12. For given solid, draw the top view, front view and side view.

13. Is it possible to have a polyhedron with any given number of faces?
14. Draw the front view, side view and top view of the given objects.

A military tent

15. How are prisms and cylinders alike?
16. How are pyramids and cones alike?
17. Is a square prism same as a cube? Explain.
18. Can a polyhedron have 10 faces, 20 edges and 15 vertices?
19. Draw the front view, side view and top view of the given objects.

A hexagonal block

20. Draw the front view, side view and top view of the given objects.

A dice

21. Draw the front view, side view and top view of the given objects.

A solid

22. Using Euler's formula find the unknown.

| Faces | $?$ | 5 | 20 |
| :---: | :---: | :---: | :---: |
| Vertices | 6 | $?$ | 12 |
| Edges | 12 | 9 | $?$ |

23. Tabulate the number of faces, edges and vertices for the following polyhedrons: (Here ' V ' stands for number of vertices, ' $F$ ' stands for number of faces and ' $E$ ' stands for number of edges).

| Solid | F | V | E | F + V | E + 2 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Cuboid |  |  |  |  |  |
| Triangular Pyramid |  |  |  |  |  |
| Triangular Prism |  |  |  |  |  |
| Pyramid with square base |  |  |  |  |  |
| Prism with square base |  |  |  |  |  |

24. Draw a figure for the following solid
$>$ A cone surmounted on a cylinder
$>$ A cylindrical shell
$>$ A cone surmounted by a hemisphere
$>$ A rectangular path
$>$ A hemispherical shell

- Cylinder surmounted by a hemisphere

25. Match the following pictures (objects) with their shapes:

## Picture (object)

## Shape

(i) An agricultural field


Two rectangular cross paths inside a rectangular park.

A circular path around a circular ground.

A triangular field adjoining a square field.
(iv) A circular park


A cone taken out of a cylinder.
(v) A cross path


A hemisphere surmounted on a cone.

