

Class: 7
Subject: Mathematics
Topic: Visualizing Solid Shapes
No. of Questions: 20
Duration: 60 Min
Maximum Marks: 60

1. Two cubes of dimensions 2 cm x 2 cm x 2 cm are placed side by side, the length of resulting Cuboid is
- A. 2
 - B. 4
 - C. 6
 - D. 7

Ans. B (Length will increase while breadth and height will remain same with side = 2 cm + 2 cm)

2. The vertical cut of a brick will show the cross section is
- A. rectangle
 - B. pentagon
 - C. circle
 - D. hexagon

Ans.A(fact)

3. Cuboid is an example of
- A. 3-D shape
 - B. 2-D shape
 - C. Both
 - D. None of these

Ans. A (As it has length breadth and height)

4. The number of faces of a cylinder is _____.
- A. 2
 - B. 3
 - C. 1

D. None of these

Ans. A (Only two, top & bottom rest area is curved surface area)

5. The number of faces of a sphere is _____.

- A. 1
- B. None of these
- C. 3
- D. 2

Ans. B (Sphere has no face, its completely circular)

6. The number of faces of a square pyramid is _____.

- A. 6
- B. 4
- C. 5
- D. None of these

Ans. B (There are 4 faces lying on the four sides of base)

7. Name of the solid given below:

- A. cuboid
- B. cylinder
- C. cone
- D. sphere

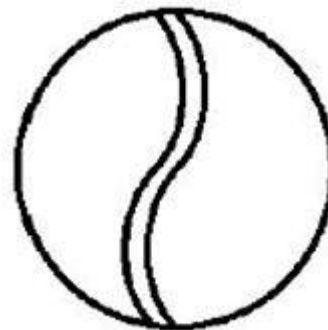
Ans. B(Fact)



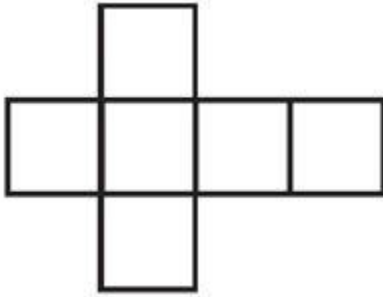
8. Name of the solid given below.

- A. cylinder
- B. cuboid
- C. cone
- D. sphere

Ans. D(fact)



9. Name of the solid whose net diagram is given below:



- A. Cube
- B. Cone
- C. Cylinder
- D. Cuboid

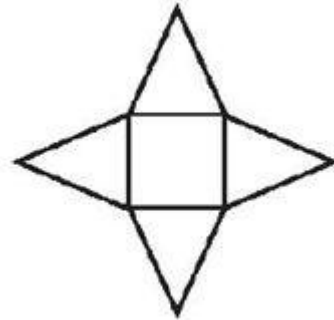
Ans. A (fact)

Its side length is same, seen from the diagram.

Now if you reassemble it will make a 3d structure with equal sides which is Cube)

10. Name of the solid whose net diagram is given below:

- A. None of these
- B. Pyramid
- C. Cone
- D. Cube



Ans. B (It's a pyramid with square base)

11. Find the surface area of a wooden box whose shape is of a cube of edge 15 cm.

- A. 1250 cm square
- B. 1350 cm square
- C. None of these
- D. 1150 cm square

Ans. B (fact) The surface area of a cube is $6(\text{side})^2$, so $6 \times 15 \times 15 = 1350$

12. A village, having a population of 4000, requires 150 litres water per head per day. It has a tank measuring 20 m by 15 m by 6 m. For how many days the water of this tank will last?

- A. None of these
- B. 3
- C. 1
- D. 2

Ans. B

The volume of tank is $20 \times 15 \times 6 = 1800 \text{ m}^3$.

We also know that $1 \text{ m}^3 = 1000 \text{ litres}$, so the tank can hold 1800000 or 1800 KL of water at max.

Now, every person requires 150 litres per day.

The whole village will need $150 \times 4000 = 600 \text{ KL}$ water per day.

So the water in tank will last for $1800/600 = 3 \text{ days}$

13. All the six faces of a _____ are congruent and adjacent faces are perpendicular to each other.

- A. None of these
- B. cylinder
- C. cone
- D. cube

Ans. D(fact)

14. What will happen to volume of a cube of side 10 cm, if its each edge is doubled?

- A. 8 times
- B. 6 times
- C. None of these
- D. 4 times

Ans. A(fact)

Volume is a^3 , if a becomes 2a then volume will become $(2a)^3$ or 8 times the original

15. George wants to make a pentagonal pyramid. How many triangles does he need to make the object?

- A. None of these
- B. 3
- C. 4
- D. 5

Ans. D(Fact)

Each side of pentagon will have one triangle resting on its side. So there will be 5 triangles

16. Which of the following statements is true?

- A. The lateral faces of a triangular prism can be squares or rectangles.
- B. The lateral faces of a square prism are triangles.
- C. The lateral faces of a triangular pyramid can be squares or rectangles.
- D. The lateral faces of a square pyramid can be squares.

Ans. A(fact)

17. Which of the following statements is false?

- A. Cylinder has curved surface.
- B. Cone has a slant height.
- C. Cone has no curved surface.
- D. Cylinder has no slant height.

Ans. C (Cone has curved surface)

18. Which of the following can be calculated only for a cone but not for a cylinder?

- A. curved surface area
- B. volume
- C. slant height
- D. base area

Ans. C (Cylinder has only height while cone has height and a slant height)

19. Identify the statement that is false for a prism.

- A. A right prism has two bases.
- B. A right prism has identical parallel faces.
- C. A right prism has rectangular lateral faces.
- D. A right prism has triangular lateral faces.

Ans. D(fact)

20. Which of the statements is false for a pyramid?

- A. A pyramid has a polygonal base.
- B. A pyramid has triangular faces.
- C. A pyramid is named by the shape of its base.
- D. A pyramid can have only rectangular base.

Ans. D (Pyramid triangular or any polygonal base)