MATHS

BOOKS - RD SHARMA MATHS (ENGLISH)

UNDERSTANDING THREE DIMENSIONAL SHAPES

Others

1. Name any four objects from your environment, which have the form of (i) a cuboid (ii) a cube

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2. Draw a diagram to represent a cuboid. Label its vertices as $P,\ Q,\ R,\ S,\ T,\ U,\ V, and\ W$. Now write the names of its faces and edges.

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3. Draw a diagram to represent a cube. Label its vertices as $A,\ B,\ C,\ D,\ E,\ F,\ G\ and\ H$. Now write the names of its faces and edges.

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4. Figure. represents a cuboid. The lengths of the edge, $AE,\ EF\ and\ FG$ are indicated as $l,\ b\ and\ h$ respectively. Indicated the lengths of all other edges.

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5. In Figure, If the face $EFGH$ is taken as the base, then name the lateral faces. Also, name the line segment representing the height of the cuboid.

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6. In Figure, name the four diagonals of the cuboid.

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7. In Figure, name the (i) face parallel to $BFGC$ (ii) faces adjacent to $BFGC$ (iii) three edges which meet in the vertex G.

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8. Fill in the blanks to make the following statements true:

(i) A cuboid has ..... vertices.

(ii) A cuboid has ..... edges

(iii) A cuboid has ..... faces.

(iv) The number of lateral faces of a cuboid is

.....

(v) A cuboid all of whose edges are equal is called a .....

(vi) Two adjacent faces of a cuboid meet in a line segment called its .....

(vii) Each edge of a cuboid can be obtained as a line segment in which two ..... meet.

(viii) ..... edges of a cube (or cuboid) meet at each of its vertices.

(ix) A ..... is a cuboid in which all the six faces are squares.

(x) The three concurrent edges of a cuboid meet at a point called the ..... of the cuboid.

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9. In each of the following, state if the statement is true (T) or false (F) :

(i)Number of faces in a cuboid and the number of faces in a cube are equal.

(ii)A cube has twelve vertices.

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10. For the cuboid show in Figure. What is the base of this cuboid? What are the lateral faces of this cuboid? Name one pair of opposite faces. How many pairs of opposite faces are there? Name them. Name all the faces of this cuboid which have X as a vertex.

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11. The dimensions of a cuboid with vertices $A,\ B,\ C,\ D,\ E,\ F,\ G\ and\ H$ are as shown

in Figure. Which edges are of length 4cm? Which edges are of length 5cm? Which faces have area equal to $20\ cm^2$? Which faces have the largest area? What is this largest area?

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12. Give two new examples of each of the following three dimensional shapes: (i)Cone (ii) Sphere (iii) Cylinder (iv)Cuboid (v) Pyramid

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13. What is the shape of your

(i) instrument box

(ii) a brick

(iii) a sweet laddoo

(iv) a rod-roller

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14. Total number of faces of a cuboid is:

A. 4

B. 6

C. 8

D. 12

Answer: B

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15. Total number of edges of a cuboid is:

A. 4

B. 6

C. 8

D. 12

Answer: D

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16. Number of vertices of a cuboid is:

A. 4

B. 6

C. 8

D. 12

Answer: C

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17. Which one of the following is an example of a cube?

A. a dice

B. a football

C. a gas pipe

D. an ice-cream cone

Answer: A

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18. A brick is an example of a:

A. cube

B. cuboid

C. prism

D. cylinder

Answer: D

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19. A gas pipe is an example of :

A. a cone

B. a cylinder

C. cube

D. sphere

Answer: B

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20. If the base radius and height of a right circular cone are 3cm and 4cm in lengths, then the slant height is (a) 5cm (b) 2cm (c) 25cm (d) 6cm

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21. The number of faces of a triangular pyramid is

A. 3

B. 4

C. 6

D. 8

Answer: B

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22. The number of edges of a triangular pyramid is (a) 3 (b) 4 (c) 6 (d) 8

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23. A tetrahedron is a pyramid whose base is a:

A. triangle

B. square

C. rectangle

D. quadrilateral

Answer: A

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