



MATHS

BOOKS - UNITED BOOK HOUSE

Rectangular Parallelopiped Cuboid

Exercise

1. Multiple Choice Questions(MCQ) The ratio of the volume of two cubes is $8 : 125$, the ratio of total surface areas of two cubes is

A. 2 : 5

B. 4 : 25

C. 24 : 25

D. 25 : 4

Answer:



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2. The ratio of the sides of two cubes is 8 : 3,
then the ratio of their diagonals is

A. $2 : 1$

B. $8 : 3$

C. $8 : \sqrt{3}$

D. $2\sqrt{2} : \sqrt{3}$.

Answer:



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3. If the length, breadth, height, total surface area and volume of a cuboid are l , b , h , s , v

respectively, then the relation between l , b , h , s , v is

A. $v^{-1} = 2s^{-1}(l^{-1} + b^{-1} + h^{-1})$

B. $v = 25(l + b + h)$

C. $s^{-1} = 2v(l^{-1} + b^{-1} + h^{-1})$

D. none of these

Answer:



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4. The length of each inside edge of a cubical tin pot is 40cm. The maximum amount of litres of kerosene it can contain is

A. 64 liters

B. 16 liters

C. 32 liters

D. 46 liters

Answer:



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5. If total surface area of a cube is s sq. unit and the length of its diagonal is d unit, then the relation between s and d is

A. $d = 2s^2$

B. $s = 2d^2$

C. $s = \frac{d^2}{2}$

D. $d^2 = \frac{S}{4}$

Answer:



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6. The dimension of two rectangular parallelepipeds are 6 unit, 4unit, 4 unit and 8 unit, $(2h + 1)$ unit, 2 unit respectively. If the volume of the two parallelepipeds are equal, then the value of h is

A. 6

B. 3.5

C. 5

D. 2.5.

Answer:



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7. If the volume of a cube is V cubic unit, then the total surface area of it is

A. $6V^{1/3}$ sq. unit

B. $6V$ sq. unit

C. $6V^{4/3}$ sq. unit

D. $6V^{2/3}$ sq. unit.

Answer:



8. The diagonal of each face of a cube is $2\sqrt{3}$ cm. the volume of the cube is

A. $8\sqrt{2}$ cu. cm.

B. 8cu.cm.

C. $6\sqrt{2}$ cu. cm.

D. 6cu.cm.

Answer:



9. The three adjacent surfaces of cuboid are x sq. unit, y sq. unit and z sq. unit. The length of its one of the diagonal is Option 1

$$\left(\frac{xy}{z} + \frac{yz}{x} + \frac{zx}{y} \right)^{\frac{1}{2}} \quad \text{Option 2}$$

$$\left(\frac{zx}{y} + \frac{xy}{z} + \frac{yz}{x} \right)^{\frac{1}{2}} \quad \text{Option 3}$$

$$\left(\frac{xy}{z} + \frac{yz}{x} + \frac{zx}{y} \right) \quad \text{Option 4}$$

$$\left(\frac{zy}{x} + \frac{yz}{x} + \frac{xy}{z} \right)$$

A. $\left(\frac{xy}{z} + \frac{yz}{x} + \frac{zx}{y} \right) \frac{1}{2}$

B. $\left(\frac{z}{xy} + \frac{x}{yz} + \frac{y}{zx} \right) \frac{1}{2}$

C. $\left(\frac{xy}{z} + \frac{yz}{x} + \frac{zx}{y} \right)$

D. $\left(\frac{z}{yx} + \frac{y}{zx} + \frac{x}{yz} \right)$

Answer:



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10. The lateral surface area of a cube is 144sq.cm., then the volume of the cube is

A. 72cu.cm.

B. 216cu.cm.

C. 36cu.cm.

D. 144cu.cm.

Answer:



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11. The dimension (S) of a rectangular parallelepiped is/are ___

A. 1

B. 2

C. 3

D. N.O.T.

Answer:



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12. The number of planes of a rectangular parallelepiped are_____

A. 4

B. 6

C. 8

D. None of these

Answer:



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13. The number of planes of a rectangular parallelepiped are_____

A. 8

B. 12

C. 16

D. none of these

Answer:



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14. The number of planes of a rectangular parallelepiped are_____

A. 6

B. 8

C. 12

D. 16

Answer:



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15. The length breadth and height of a cuboidal room be a unit, b unit, and c unit respectively and $a + b + c = 25$, $ab + bc + ca = 240.5$ then find the length of the longest rod to be ket inside the room.

A. $\sqrt{1066}$ units

B. 144 units

C. 12 units

D. cannot be determined

Answer:



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16. The numerical value of whose surface and volume of a cube are equal. The length of its diagonal is ____

A. 6 units

B. $6\sqrt{2}$ units

C. $6\sqrt{3}$ units

D. N.O.T.

Answer:



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17. Dimensions of two cuboids of equal volume are 4, 6, 4 units and 8, $(2h - 1)$, 2 units. Then h equals___

A. 3 units

B. 4 units

C. 5 units

D. N.O.T.

Answer:



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18. If the number of surface of a cuboid is x , the number of edges is y , the number of

vertices is z and the number of diagonals is P ,
then find the value of $x - y + z + P$.

A. 4

B. 6

C. 18

D. N.O.T.

Answer:



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19. The area of whole surface of a cube being S square units and length of diagonal being a units. The relation between S and d is ____

A. $S = 6d^2$

B. $3s = 7d$

C. $s^3 = d^2$

D. $d^2 = \frac{s}{2}$

Answer:



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20. If any edge of a cube is increased 50%,
Measure of increment of its volume is_____

A. 237.5%

B. 1.25

C. 1

D. N.O.T.

Answer:



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21. Three solid cubes of edges 3 units, 4 units and 5 units are melted to make another solid cube. The edge of the new cube is ____

A. 5 units

B. 6 units

C. 7 units

D. N.O.T.

Answer:



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22. The length, breadth and height of a cuboid are in the ratio 1 : 2 : 3. If they are increased by 100%, 200% and 200% respectively, then compared to the original volume the increase in the volume of the cuboid will be _____

- A. 5 times
- B. 18 times
- C. 12 times
- D. 17 times

Answer:



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23. The volume (in m^3) of rain water that can be collected from 1.5 hectares of ground in a rainfall of 5 am is _____

- A. 75 cubic m
- B. 750 cubic m
- C. 7500 cubic m
- D. 75000 cubic m

Answer:



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24. A tank 40 m long, 30 m broad and 12 m deep is dug in a field 1000 m long and 30 m wide. By how much will the level of the field rise if the earth dugout of the tank is evenly spread over the field?

A. 2 metre

B. 1.2 metre

C. 0.5 metre

D. 5 metres

Answer:



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25. A rectangular block of metal has dimensions 21 cm, 77 cm and 24 cm. The block has been melted into a sphere the radius of the sphere is _____

A. 21 cm

B. 7 cm

C. 14 cm

D. 28 cm

Answer:



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26. A cistern 6 m long and 4 m wide, contains water up to a depth of 1m 25 cm. The total area of the wet surface is _____

A. $55m^2$

B. $53.5m^2$

C. $50m^2$

D. $49m^2$

Answer:



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