



MATHS

BOOKS - UNITED BOOK HOUSE

Sphere

Exercise

1. Multiple Choice Questions (MCQ) If the curved surface area of a sphere is 5544 sq.cm. then the diameter of the sphere is

A. 21 cm.

B. 43cm.

C. 22cm.

D. 44cm.

Answer:



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2. If the volume of the solid sphere be 38808 c.c, then the radius of the sphere is

A. 14cm.

B. 42cm.

C. 21cm.

D. none of these.

Answer:



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3. The volume of a solid sphere of diameter R
is

A. $\frac{4}{3}\pi R^2$

B. $\frac{2}{3}\pi R^3$

C. $4\pi R^3$

D. $\frac{1}{6}\pi R^3$

Answer:



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4. The ratio of the surface area of a sphere and whole surface area of a hollow hemisphere of same measurement will be

A. 1 : 1

B. 2 : 1

C. 3 : 1

D. 4 : 3.

Answer:



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5. The diameter of a hemisphere is diameter of a sphere. Then the ratio of the volumes of sphere and hemisphere is

A. 1 : 4

B. 4 : 1

C. 1 : 2

D. 2 : 1.

Answer:



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6. If the whole surface area of a sphere be Πd^2 sq.unit, then the volume of the sphere be

A. $\frac{\Pi d^3}{4}$ cu.unit

B. $\frac{\Pi d^3}{6}$ cu.unit

C. $\frac{2}{3}\Pi d^2$ cu.unit

D. $\frac{\Pi d^3}{3}$ cu.unit.

Answer:



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7. The volume of a solid hemisphere and its curved surface are numerically equal, then the diameter of the hemisphere is

A. 2unit

B. 3unit

C. 4.5 unit

D. 6unit.

Answer:



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8. If the diameter of the base of a solid hemisphere is $4d$ unit. Then the area of whole surface of the hemisphere is

A. $\frac{3}{4}\Pi d^2$ sq.unit

B. $12\Pi d^2$ sq.unit

C. $\frac{3}{2}\Pi d^2$ sq.unit

D. none of these.

Answer:



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9. If the ratio of the volumes of two solid spheres is 8 : 27 then the ratio of their radii is

A. 4 : 3

B. 4 : 9

C. 2 : 3

D. 3 : 5.

Answer:



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10. The ratio of whole surface area of a solid sphere and a solid hemisphere sphere of same diameter is

A. 2 : 3

B. 4 : 3

C. 3 : 2

D. 3 : 4.

Answer:



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11. A sphere and a hemisphere have the same volume. The ratio of their radii is ____

A. 1 : 2

B. 1 : 8

C. 1 : $\sqrt{2}$

D. 1 : $\sqrt[3]{2}$

Answer:



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12. The total surface area of a cube and a sphere are equal. What will be the ratio between their volumes?

A. $\pi : 6$

B. $\sqrt{\pi} : \sqrt{6}$

C. $\sqrt{6} : \sqrt{\pi}$

D. $6 : \pi$

Answer:



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13. The sum of radii of two spheres is 10 cm and the sum of their volume is 880 cm^3 . What will be the product of their radii?

A. 21

B. 26.33333333333333

C. 33.33333333333333

D. 70

Answer:



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14. A hollow spherical nutrallic ball has an external diameter 6 cm and is $\frac{1}{2}$ cm thick. The volume of the ball (in cm^3) is ___

A. 41.6666666666667

B. 37.6666666666667

C. 47.6666666666667

D. 40.6666666666667

Answer:



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15. If the radius of a sphere is doubled, its volume becomes _____

A. double

B. four times

C. six times

D. eight times

Answer:



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16. The radii of two sphere are in ratio 3 : 2
their volume will be the ratio ____

A. 9 : 4

B. 3 : 2

C. 8 : 27

D. 27 : 8

Answer:



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17. The total surface area of a solid hemisphere is $108 \pi \text{ cm}^2$. The volume of the hemisphere is _____

A. $72\pi cm^3$

B. $144\pi cm^3$

C. $108\sqrt{6}cm^3$

D. $54\sqrt{6}cm^3$

Answer:



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18. The largest sphere is carved out a cube of side 7 cm. The volume of the sphere (in cm^3) will be___

A. 718.66

B. 543.72

C. 481.34

D. 179.67

Answer:



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19. The surface areas of two spheres are in the ratio 4 : 9. Their volumes will be in ratio ___

A. 2 : 3

B. 4 : 9

C. 8 : 27

D. 64 : 729

Answer:



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20. A solid sphere of 6 cm diameter is melted and recast into 8 solid spheres of equal

volume. The radius (in cm) of each small sphere is__

A. 1.5

B. 2

C. 3

D. 2.5

Answer:



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21. The total surface area of a sphere is 8Π square unit. The volume of the sphere is _____

A. $\frac{8\sqrt{2}}{3}\Pi$

B. $\frac{8}{3}\Pi$

C. $8\sqrt{3}\Pi$

D. $\frac{8\sqrt{3}}{5}\Pi$

Answer:



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22. The volume of sphere and a right circular cylinder having the same radius are equal. The ratio of the diameter of the sphere to the height of the cylinder is _____

A. 3 : 2

B. 2 : 3

C. 1 : 2

D. 2 : 1

Answer:



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23. If the radius of a sphere be doubled, then the percentage increase in volume is_____

A. 500

B. 600

C. 700

D. 800

Answer:



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24. A sphere and a hemisphere have the same volume. The ratio of their curved surface area is ___

A. $2^{\frac{3}{2}} : 1$

B. $2^{\frac{2}{3}} : 1$

C. $4^{-\frac{2}{3}} : 1$

D. $2^{\frac{1}{3}} : 1$

Answer:



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25. Curved surface area and volume of a solid sphere are S and V respectively. Find the value of $\frac{S^3}{V^2}$.



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26. A copper sphere of radius 3 cm is beaten and drawn into a wire of diameter 0.2 cm. The length of the wire is _____

A. 9 m

B. 12 m

C. 18 m

D. 36 m

Answer:



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27. A spherical lead ball of radius 10 cm is melted and small lead balls of radius 5 mm are made. The total number of possible small lead balls is _____

A. 8000

B. 400

C. 800

D. 125

Answer:



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28. A sphere of radius 6 cm is dropped into a cylinder vessel partly filled with water. The radius of the vessel is 8 cm. If the sphere is

submerged completely, then the surface of water rises by_____

A. 2 cm

B. 3 cm

C. 4 cm

D. 4.5 cm

Answer:



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29. The metallic spheres of radii 6 cm, 8 cm and 10 cm are melted to form a single sphere, the diameter of the sphere is ____

A. 12 cm

B. 24 cm

C. 30 cm

D. 36 cm

Answer:



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30. The volume of the greatest sphere that can be cut off from a cylindrical log of wood of base radius 1 cm and height 5 cm is __

A. $\frac{4}{3}\Pi$

B. $\frac{10}{3}\Pi$

C. 5Π

D. $\frac{20}{3}\Pi$

Answer:



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