



MATHS

BOOKS - UNITED BOOK HOUSE

Right Circular Cylinder

Exercise

1. Multiple Choice Questions (MQC) If the ratio of the radii of two solid right circular cylinder

is 3 : 4 and the ratio of their curved surface area is 1 : 2, then the ratio of their height is

A. 2 : 3

B. 3 : 4

C. 4 : 3

D. 3 : 5

Answer:



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2. If the external and internal radii of a hollow right circular cylinder be R unit and r unit respectively and height is h unit then the volume of the cylinder is

A. $(\pi r^2 - \pi R^2)h$ c. unit

B. $\pi r^2 Rh$ c. unit

C. $\pi r(r + h)(r - R)$ c. unit

D. $\pi(R + r)(R - r)h$ c. unit

Answer:



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3. If the ratio of the radius of two solid right circular cylinder be $2 : 3$ and the ratio of their heights is $5 : 3$, then the ratio of their curved surface area is

A. $2 : 3$

B. $5 : 3$

C. $10 : 9$

D. $3 : 5$.

Answer:



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4. If the numerical values of volume and curved surface area of a right circular cylinder are equal then find the length of its radius.

A. 4 unit

B. 2 unit

C. 1 unit

D. none of these

Answer:



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5. The ratio of heights of two solid right circular cylinder is $2 : 3$. If the volume of them are same, then the ratio of their diameters is

A. $\sqrt{2} : 3$

B. $2 : \sqrt{3}$

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

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

Answer:



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6. The ratio of radii of two solid cylinders is $3 : 2$ and the ratio of their heights is $2 : 3$, then the ratio of their volume is

A. $2 : 3$

B. $3 : 2$

C. $4 : 9$

D. $9 : 4$.

Answer:



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7. The heights and the area of curved surface of a solid right circular cylinder are 14cm. And 132 sq.cm. The volume of it is

A. 99 c.cm.

B. 89 c.cm.

C. 98 c.cm.

D. none of these.

Answer:



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8. If the height of a solid right circular cylinder of 7cm. Is increased by 10%, then the volume of the cylinder is increased by 154 c.cm. The radius of the cylinder is

A. 8cm.

B. 10cm.

C. 12cm.

D. 15cm.

Answer:



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9. The numerical values of volume and total surface area of a solid right circular cylinder are same. If h and r are the height and radius of the cylinder respectively then the value of $\frac{h+r}{hr}$ is

A. 2

B. $\frac{1}{2}$

C. $\frac{1}{3}$

D. $\frac{1}{4}$.

Answer:



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10. If the ratios of the volumes and heights of two solid right circular cylinder are $10 : 7$ and $6 : 5$ respectively, then the ratio of their radii is

A. 9 : 4

B. 3 : 2

C. 2 : 3

D. 4 : 9.

Answer:



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11. Number of surface of a solid right circular cylinder is _____.

A. 2

B. 3

C. 4

D. 5

Answer:



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12. The perimeter of the base of a right circular cylinder is 'a' unit. If the volume of the cylinder

is V cubic unit, then the height of the cylinder

is _____

A. $\frac{4a^2V}{n}$

B. $\frac{4\pi a^2}{V}$

C. $\frac{\pi a^2 V}{4}$

D. $\frac{4\pi V}{a^2}$

Answer:



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13. The curved surface area and the total surface area of a cylinder are in the ratio 1 : 2. If the total surface area of the right, cylinder is 616 cm^2 , then its volume is _____

A. 1232 cm^2

B. 1848 cm^3

C. 1632 cm^3

D. 1078 cm^3

Answer:



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14. The radii of the base of two cylinders A and B are in the ratio 3 : 2 and their height in the ratio $n : 1$. If the volume of cylinder A is 3 times that of cylinder B, the value of n is ___

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

B. $\frac{2}{3}$

C. $\frac{3}{4}$

D. $\frac{3}{2}$

Answer:



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15. The curved surface area of a cylindrical pillar is 264 m^2 and its volume is 924 m^3 . Find ratio of its diameter to its height _____

A. 7 : 6

B. 6 : 7

C. 3 : 7

D. 7 : 3

Answer:



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16. The base radii of two cylinders are in the ratio 2 : 3 and their heights are in the ratio 5 : 3. The ratio of their volumes is ____

A. 27 : 20

B. 20 : 27

C. 9 : 4

D. 4 : 9

Answer:



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17. A hollow cylinder tube 20 cm long is made of iron and its external and internal diameters are 8 cm and 6 cm respectively. The volume of iron used in making the tube is ____

A. 1760 Cu.cm

B. 880 cm

C. 440 cu. Cm

D. 220 cu. Cm

Answer:



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18. A hollow iron pipe is 21 cm long and its exterior diameter is 8 cm. If the thickness of the pipe is 1 cm and iron weights 8 g/cm^3 , then the weight of the pipe is_____

A. 3.696 kg

B. 3.6 kg

C. 36 kg

D. 36.9 kg

Answer:



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19. The volume of a right circular cylinder, 14 cm in height, is equal to that of a cube whose edge is 11 cm. The radius of the base of the cylinder is _____

A. 5.2 cm

B. 5.5 cm

C. 11 cm

D. 22 cm

Answer:



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20. If the volume of a right circular cylinder is $9\pi hm^3$ where h is its height (in metres) then

the diameter of the base of the cylinder is equal to ___

A. 3 m

B. 6 m

C. 9 m

D. 12 m

Answer:



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21. A right circular cylinder of height 16 cm is covered by a rectangular tin foil of size 16 cm times 22 cm. The volume of the cylinder is ___

A. 352cm^3

B. 308cm^3

C. 616cm^3

D. 176cm^3

Answer:



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22. The volume of the metal of a cylindrical pipe is 748 cm^2 . The length of the pipe is 14 cm and its external radius is 9 cm. Its thickness is ___

A. 1 cm

B. 5.2 cm

C. 2.3 cm

D. 3.7 cm

Answer:



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23. Water is being pumped out through a circular pipe whose internal diameter is 7 cm. If the flow of water is 12 cm/sec, how many litres of water is being pumped out in one hour?

A. 1663.2

B. 1500

C. 1747.6

D. 2000

Answer:



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24. A cylinder has 'r' as the radius of the base and 'h' as the height. The radius of base of another cylinder, having double volume but same height as that of the first cylinder must be equal to ___

A. $\frac{r}{\sqrt{2}}$

B. $2r$

C. $r\sqrt{2}$

D. $\sqrt{2}r$

Answer:



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25. If the height of a right circular cylinder and its radius are increased and decreased by 50% respectively to form a new cylinder, the volume will be decreased by___

A. 0

B. 0.25

C. 0.625

D. 0.75

Answer:



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26. Two solid cylinders of radii 4 cm and 5 cm and length 6 cm and 4 cm respectively are

recast into cylindrical disc of thickness 1 cm.

The radius of the disc is ___

A. 7 cm

B. 14 cm

C. 21 cm

D. 28 cm

Answer:



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