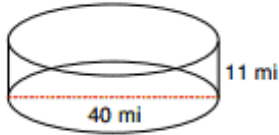


Homework 3.7 Finding Volumes of 3-D Shapes: Prisms & Cylinders

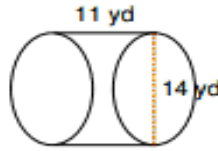
Find the volume of the cylinders below. Round your answer to two decimal places.

$$V = B * h \text{ or } \pi r^2 h$$

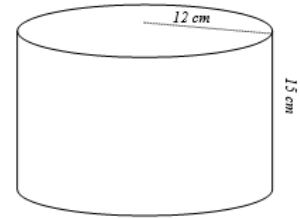
1.



2.



3.

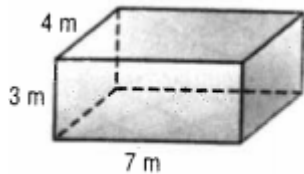


4. Find the volume of a cylinder with a diameter of 7.2 cm and a height of 6cm.

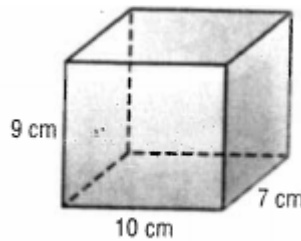
5. Find the radius of a cylinder with a volume of 628.3 ft³ and a height of 8 ft.

Find the volume of the prisms below. Round your answer to two decimal places. $V = B * h$ or $V = l * w * h$

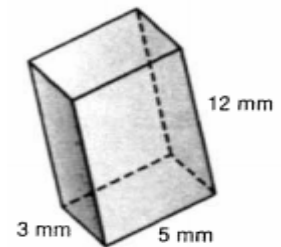
6.



7.



8.



9. A box of tissues has a length of 11.2 centimeters, a width of 11.2 centimeters and a height of 13 centimeters. What is the volume of the tissue box?

10. The cargo-carrying part of Billy's truck has a length of 8.3 meters, a width of 3 meters, and a height of 4.2 meters. What is the maximum volume of sand that Billy's truck can carry?

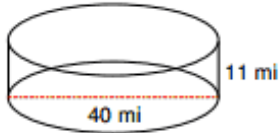
Homework 3.7 Finding Volumes of 3-D Shapes: Prisms & Cylinders

Solutions

Find the volume of the cylinders below. Round your answer to two decimal places.

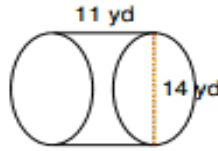
$V = B * h$ or $\pi r^2 h$

1.



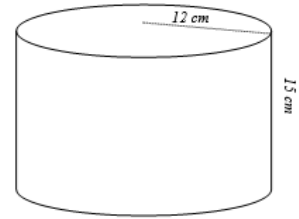
$V = 13823 \text{ mi}^3$

2.



$V = 1693.3 \text{ yd}^3$

3.



$V = 6785.84 \text{ cm}^3$

4. Find the volume of a cylinder with a diameter of 7.2 cm and a height of 6cm.

$V = 244.29 \text{ cm}^3$

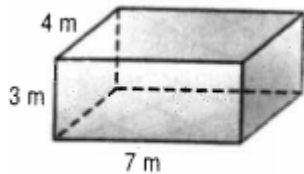
5. Find the radius of a cylinder with a volume of 628.3 ft³ and a height of 8 ft.

$r = 5$

Find the volume of the prisms below. Round your answer to two decimal places.

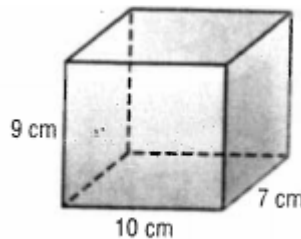
$V = B * h$ or $V = l * w * h$

6.



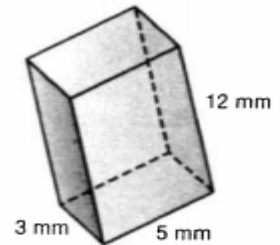
$V = 84 \text{ m}^3$

7.



$V = 630 \text{ cm}^3$

8.



$V = 180 \text{ mm}^3$

9. A box of tissues has a length of 11.2 centimeters, a width of 11.2 centimeters and a height of 13 centimeters. What is the volume of the tissue box?

$V = 1630.72 \text{ cm}^3$

10. The cargo-carrying part of Billy's truck has a length of 8.3 meters, a width of 3 meters, and a height of 4.2 meters. What is the maximum volume of sand that Billy's truck can carry?

$V = 104.58 \text{ m}^3$

Homework 3.7 Finding Volumes of 3-D Shapes: Prisms & Cylinders (Page 2)

11. Find the volume of a rectangular prism measuring 10m and 7m along the base and 12m tall.



12. A box in the shape of a right rectangular prism has a volume of 60cubic inches. The height of the box is 3 inches, and the width is 4 inches. What is the length, in inches of the box?



13. Two containers in the shape of right circular cylinders are equal in height. The radius of the larger container is 3 times the radius of the smaller. The volume of the larger container is how many times the volume of the smaller container?

- A. 3
- B. 6
- C. 9
- D. 27

14. A cube has a volume of 120 cm^3 . Which of the following is closest to the length of an edge of the cube?

- A. 5 cm
- B. 7 cm
- C. 9 cm
- D. 11 cm

15. What is the approximate height of a cylinder that has a diameter of 8 feet and a volume of 502.4 cubic feet?

- A. 2.5 ft.
- B. 5 ft.
- C. 10 ft.
- D. 20 ft.

11. Find the volume of a rectangular prism measuring 10m and 7m along the base and 12m tall.

$$V = 840 \text{ m}^3$$

12. A box in the shape of a right rectangular prism has a volume of 60 cubic inches. The height of the box is 3 inches, and the width is 4 inches. What is the length, in inches, of the box?

$$l = 5 \text{ in.}$$

13. Two containers in the shape of right circular cylinders are equal in height. The radius of the larger container is 3 times the radius of the smaller. The volume of the larger container is how many times the volume of the smaller container?

- A. 3
- B. 6
- C. 9
- D. 27

C

14. A cube has a volume of 120 cm^3 . Which of the following is closest to the length of an edge of the cube?

- A. 5 cm
- B. 7 cm
- C. 9 cm
- D. 11 cm

A

15. What is the approximate height of a cylinder that has a diameter of 8 feet and a volume of 502.4 cubic feet?

- A. 2.5 ft.
- B. 5 ft.
- C. 10 ft.
- D. 20 ft.

C