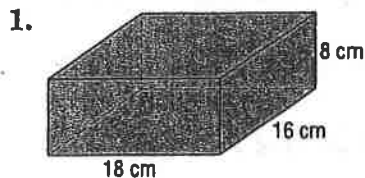


13-1 Skills Practice

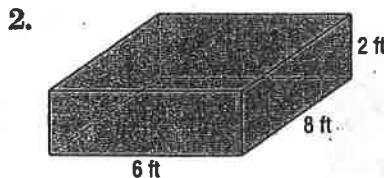
Volumes of Prisms and Cylinders

Find the volume of each prism or cylinder. Round to the nearest tenth if necessary.



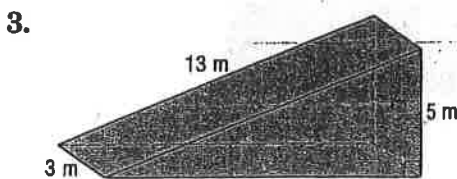
$$B = 8(16) = 128$$

$$V = (128)(18) = 2304 \text{ cm}^3$$



$$B = 8(2) = 16$$

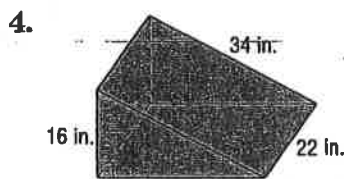
$$V = 16(6) = 96 \text{ ft}^3$$



$$5^2 + b^2 = 13^2 \quad b = 12$$

$$B = \frac{1}{2}(12)(5) = 30$$

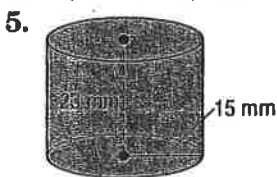
$$V = 30(3) = 90 \text{ m}^3$$



$$16^2 + b^2 = 34^2 \quad b = 30$$

$$B = \frac{1}{2}(30)(16) = 240$$

$$V = 240(22) = 5280 \text{ in}^3$$



$$V = \pi(15^2)(23)$$

$$V = 10244.5 \text{ mm}^3$$

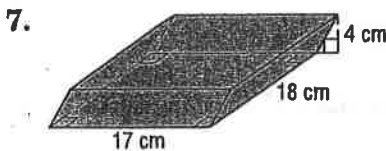
$$10257.7$$



$$6^2 + h^2 = 10^2 \quad h = 8$$

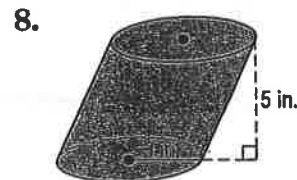
$$V = \pi(3^2)(8) = 226.2 \text{ yd}^3$$

Find the volume of each oblique prism or cylinder. Round to the nearest tenth if necessary.



$$B = (17)(4) = 68$$

$$V = (68)(18) = 1224 \text{ cm}^3$$



$$V = \pi(3^2)(5) = 141.3 \text{ in}^3$$

$$141.3$$

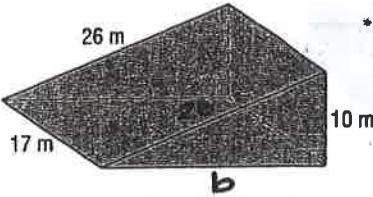
Lesson 13-1

13-1 Practice

Volumes of Prisms and Cylinders

Find the volume of each prism or cylinder. Round to the nearest tenth if necessary.

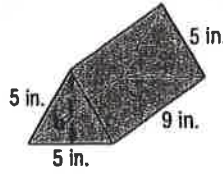
1.



$$10^2 + b^2 = 26^2 \quad b = 24 \quad B = \frac{1}{2}(24)(10)$$

$$V = 120(17) = 2040 \text{ m}^3$$

2.

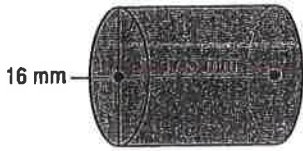


$$h^2 + 2.5^2 = 5^2 \quad h = 4.3$$

$$B = \frac{1}{2}(4.3)(5) = 10.8$$

$$V = 10.8(9) = 97.2 \text{ in}^3$$

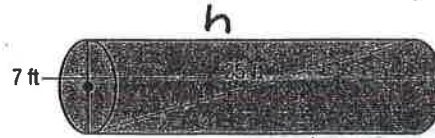
3.



$$V = \pi(8^2)(17.5) = 3518.6$$

$$V = \pi(8^2)(17.5) = 3518.8 \text{ mm}^3$$

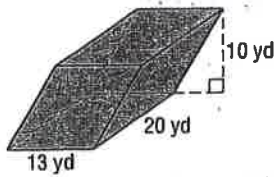
4.



$$7^2 + h^2 = 25^2 \quad h = 24$$

$$V = \pi(3.5^2)(24) = 923.6 \text{ ft}^3$$

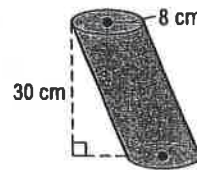
5.



$$B = 13(10) = 130$$

$$V = (130)(20) = 2600 \text{ yd}^3$$

6.



$$V = \pi(4^2)(30) = 6031.9$$

$$V = \pi(4^2)(30) = 6028.8 \text{ cm}^3$$

AQUARIUM For Exercises 7–9, use the following information. Round answers to the nearest tenth.

Mr. Gutierrez purchased a cylindrical aquarium for his office. The aquarium has a height of $25\frac{1}{2}$ inches and a radius of 21 inches.

7. What is the volume of the aquarium in cubic feet?

$$20.4 \text{ ft}^3$$

8. If there are 7.48 gallons in a cubic foot, how many gallons of water does the aquarium hold?

$$152.9 \text{ gal.}$$

9. If a cubic foot of water weighs about 62.4 pounds, what is the weight of the water in the aquarium to the nearest five pounds?

$$1275 \text{ lb.}$$