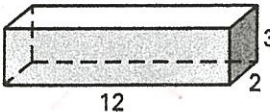
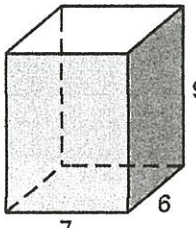


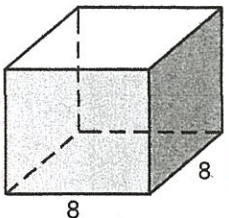
Practice A

For use with pages 743-749

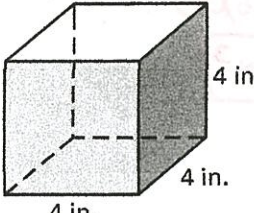
Find the number of unit cubes that will fit in the box. Explain your reasoning.

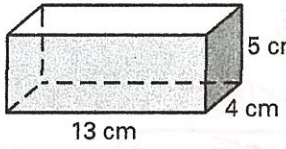
1.   
 $V = (12 \cdot 2) \cdot 3$   
 $V = 72 \text{ UNITS}^3$

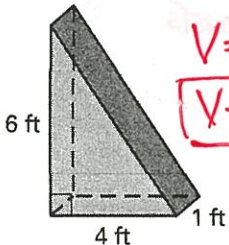
2.   
 $V = (7 \cdot 6) \cdot 9$   
 $V = 378 \text{ UNITS}^3$

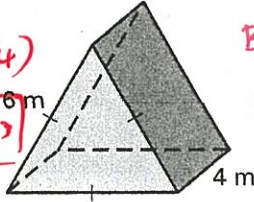
3.   
 $V = (8 \cdot 8) \cdot 6$   
 $V = 384 \text{ UNITS}^3$

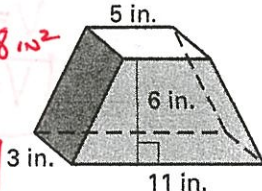
Find the volume of the right prism.

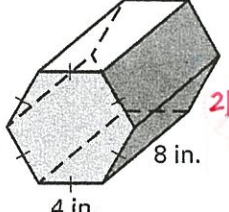
4.   
 $V = (4 \cdot 4) \cdot 4$   
 $V = 64 \text{ in}^3$

5.   
 $V = (13 \cdot 4) \cdot 5$   
 $V = 260 \text{ cm}^3$

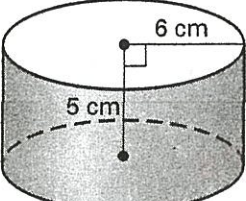
6.   
 $V = \left(\frac{6 \cdot 4}{2}\right) \cdot 1$   
 $V = 12 \text{ Ft}^3$


7.   
 $B = \frac{6(5+1)}{2} = 48 \text{ in}^2$   
 $V = 48(3)$   
 $V = 144 \text{ in}^3$

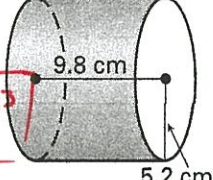
8.   
 $B = \frac{6(5+11)}{2} = 48 \text{ in}^2$   
 $V = 48(3)$   
 $V = 144 \text{ in}^3$

9.   
 $B = \frac{24(2\sqrt{3})}{2}$   
 $B = 24\sqrt{3}$   
 $V = 24\sqrt{3}(8)$   
 $V = 192\sqrt{3} \text{ in}^3$

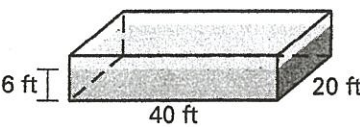
Find the volume of the right cylinder. LEAVE IN  $\pi$ .

10.   
 $V = \pi(6)^2(5)$   
 $V = 180\pi \text{ cm}^3$

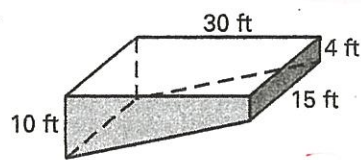
11.   
 $V = \pi(4)^2(11)$   
 $V = 176\pi \text{ in}^3$

12.   
 $V = \pi(9.8)^2(5.2)$   
 $V = 264.992\pi \text{ cm}^3$

13. **Swimming Pool** A swimming pool measures 40 feet long by 20 feet wide. The pool is filled to a depth of 6 feet. Find the volume of the water in the pool.

  
 $V = (40 \cdot 20) \cdot 6$   
 $V = 4800 \text{ Ft}^3$

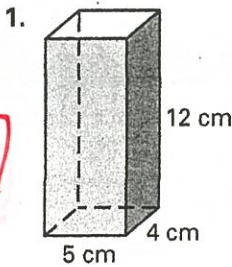
14. **Swimming Pool** A common design for swimming pools is for the depth to change gradually from the shallow end to the deep end. Use the dimensions shown to find the volume of water the pool can hold.

  
 $B = 90 + 120$   
 $B = 210 \text{ Ft}^2$   
 $V = 210(15)$   
 $V = 3150 \text{ Ft}^3$

**Practice B**

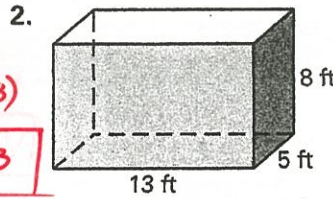
For use with pages 743-749

Find the volume of the right prism.



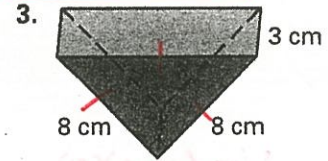
$$V = (5 \cdot 4)(12)$$

$$V = 240 \text{ cm}^3$$



$$V = (13 \cdot 5)(8)$$

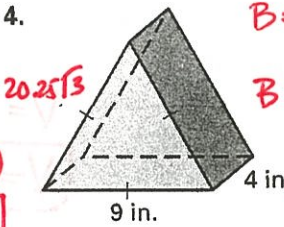
$$V = 520 \text{ ft}^3$$



$$B = \frac{(8)(8)\sqrt{3}}{4} = 16\sqrt{3}$$

$$V = (16\sqrt{3})(3)$$

$$V = 48\sqrt{3} \text{ cm}^3$$



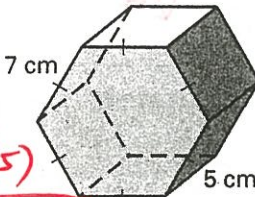
$$B = \frac{(9)(9)\sqrt{3}}{4} = 20.25\sqrt{3}$$

$$V = (20.25\sqrt{3})(4)$$

$$V = 81\sqrt{3} \text{ in}^3$$

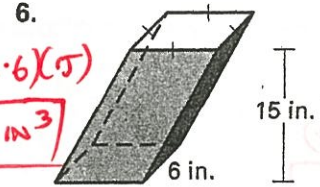
$$B = \frac{42(3.5\sqrt{3})}{2}$$

$$B = 73.5\sqrt{3}$$



$$V = 73.5\sqrt{3}(5)$$

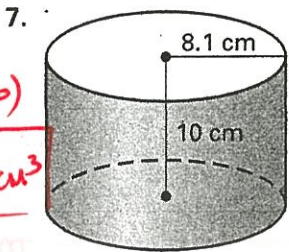
$$V = 367.5\sqrt{3} \text{ cm}^3$$



$$V = (6 \cdot 6)(15)$$

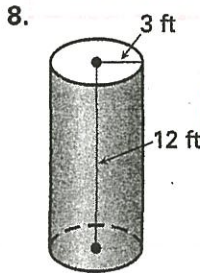
$$V = 540 \text{ in}^3$$

Find the volume of the right cylinder. LEAVE IN  $\pi$ .



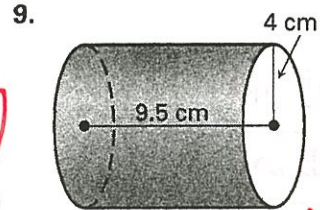
$$V = \pi(8.1)^2(10)$$

$$V = 656.1\pi \text{ cm}^3$$



$$V = \pi(3)^2(12)$$

$$V = 108\pi \text{ ft}^3$$

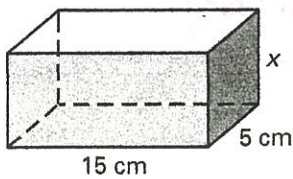


$$V = \pi(4)^2(9.5)$$

$$V = 152\pi \text{ cm}^3$$

Solve for the variable using the given measurements. The prisms and the cylinders are right.

10. Volume =  $525 \text{ cm}^3$

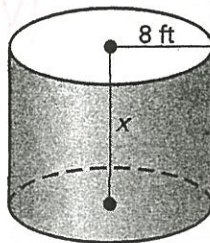


$$525 = (15 \cdot 5)x$$

$$525 = 75x$$

$$7 \text{ cm} = x$$

11. Volume =  $1024\pi \text{ ft}^3$

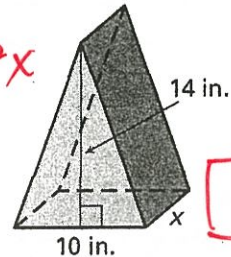


$$1024\pi = \pi(8)^2x$$

$$1024\pi = 64\pi x$$

$$16 \text{ ft} = x$$

12. Volume =  $455 \text{ in}^3$



$$455 = \left(\frac{10 \cdot 10}{2}\right)x$$

$$455 = 70x$$

$$6.5 \text{ in} = x$$

$$V = (6 \cdot 6)(6)$$

$$V = 216 \text{ cm}^3$$

13. Find the volume of a cube with 6 cm edges.

15. Find the volume of a cylinder with a 2 m radius and a 4 m height.

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

$$V = 16\pi \text{ m}^3$$

14. Find the volume of a rectangular prism that is 5 in. by 6 in. by 3 in.

$$V = (5 \cdot 6)(3)$$

$$V = 90 \text{ in}^3$$

16. Find the volume of a cylinder with a base area of  $625\pi \text{ in}^2$  and a height of 25 in.

$$A = \pi r^2$$

$$625\pi = \pi r^2$$

$$\sqrt{625} = \sqrt{r^2}$$

$$25 \text{ in} = r$$

$$V = \pi(25)^2(25)$$

$$V = 15625\pi \text{ in}^3$$