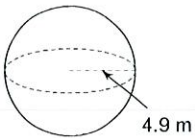


$SA = 4\pi r^2$

## Day 4 Practice - Spheres

Find the surface area of each figure.

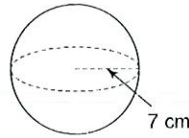
1)



$$\begin{aligned} SA &= 4\pi(4.9)^2 \\ &= 4\pi(24.01) \\ &= 96.04\pi \end{aligned}$$

$$96.04\pi m^2$$

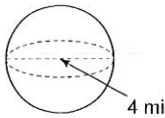
2)



$$\begin{aligned} SA &= 4\pi(7)^2 \\ &= 4\pi(49) \\ &= 196\pi \end{aligned}$$

$$196\pi cm^2$$

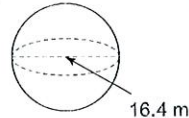
3)



$$\begin{aligned} SA &= 4\pi(4)^2 \\ &= 4\pi(16) \\ &= 64\pi \end{aligned}$$

$$64\pi mi^2$$

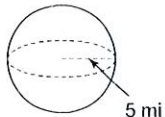
4)



$$\begin{aligned} SA &= 4\pi(8.2)^2 \\ &= 4\pi(67.24) \\ &= 268.96\pi \end{aligned}$$

$$268.96\pi m^2$$

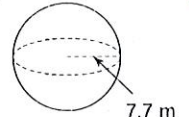
5)



$$\begin{aligned} SA &= 4\pi(5)^2 \\ &= 4\pi(25) \\ &= 100\pi \end{aligned}$$

$$100\pi mi^2$$

6)



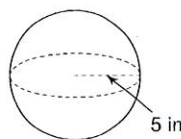
$$\begin{aligned} SA &= 4\pi(7.7)^2 \\ &= 4\pi(59.29) \\ &= 237.16\pi \end{aligned}$$

$$237.16\pi m^2$$

$V = \frac{4}{3}\pi r^3$

Find the volume of each figure.

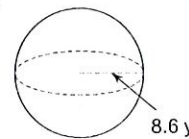
7)



$$\begin{aligned} V &= \frac{4}{3}\pi(5)^3 \\ &= \frac{4}{3}\pi(125) \\ &= 166.67\pi \end{aligned}$$

$$166.67\pi in^3$$

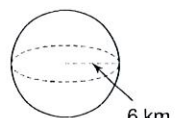
8)



$$\begin{aligned} V &= \frac{4}{3}\pi(8.6)^3 \\ &= \frac{4}{3}\pi(636.056) \\ &= 848.07\pi \end{aligned}$$

$$848.07\pi yd^3$$

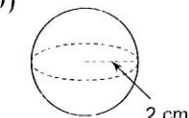
9)



$$\begin{aligned} V &= \frac{4}{3}\pi(6)^3 \\ &= \frac{4}{3}\pi(216) \\ &= 288\pi \end{aligned}$$

$$288\pi km^3$$

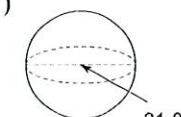
10)



$$\begin{aligned} V &= \frac{4}{3}\pi(2)^3 \\ &= \frac{4}{3}\pi(8) \\ &= 10.67\pi \end{aligned}$$

$$10.67\pi cm^3$$

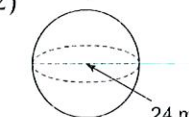
11)



$$\begin{aligned} V &= \frac{4}{3}\pi(21.8)^3 \\ &= \frac{4}{3}\pi(1295.029) \\ &= 1726.71\pi \end{aligned}$$

$$1726.71\pi cm^3$$

12)



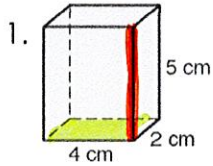
$$\begin{aligned} V &= \frac{4}{3}\pi(24)^3 \\ &= \frac{4}{3}\pi(1728) \\ &= 2304\pi \end{aligned}$$

$$2304\pi mi^3$$

**Day 5 – Volume of Prisms and Pyramids**

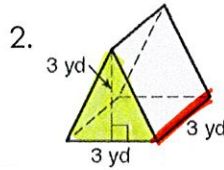
Find the volume of each prism. Round to the nearest tenth if necessary.

$V=Bh$



the right rectangular prism

$B = 8\text{cm}^2$   $V = 40\text{cm}^3$   
 $l \cdot w = 4 \cdot 2 = 8$  |  $Bh = (8)(5) = 40$



the triangular prism

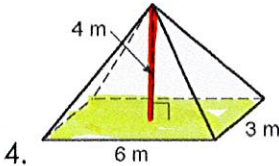
$B = 4.5\text{yd}^2$   $V = 13.5\text{yd}^3$   
 $\frac{1}{2}Bh = \frac{1}{2}(3)(3) = 4.5$  |  $Bh = (4.5)(3) = 13.5$

3. Torrie needs to store 8 boxes while she is moving. Each box is a cube with edge length 3 feet. A storage facility charges \$0.75 for every cubic foot of storage per month. Find the amount of money Torrie will pay to store her boxes for one month.

$V = l \cdot w \cdot h = 3 \cdot 3 \cdot 3 = 27$  |  $27 \cdot 8 = 216$  |  $216 \cdot (.75) = 162$  she will pay \$162

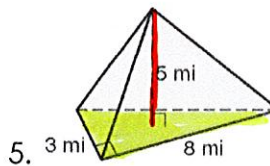
$V = \frac{1}{3}Bh$

Find the volume of each pyramid.



the rectangular pyramid

$B = 18\text{m}^2$   $V = 24\text{m}^3$   
 $l \cdot w = 6 \cdot 3 = 18$  |  $\frac{Bh}{3} = \frac{(18)(4)}{3} = 24$



the right triangular pyramid

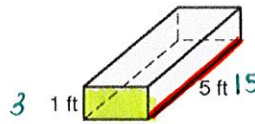
$B = 12\text{mi}^2$   $V = 20\text{mi}^3$   
 $\frac{1}{2}Bh = \frac{1}{2}(3)(8) = 12$  |  $\frac{Bh}{3} = \frac{(12)(5)}{3} = 20$

6. a square pyramid with side length 10 in. and height 12 in.

$B = 100\text{in}^2$   $V = 400\text{in}^3$   
 $l \cdot w = 10 \cdot 10 = 100$  |  $\frac{Bh}{3} = \frac{(100)(12)}{3} = 400$

**Complete Exercises 7–9 to describe the effect on the volume of multiplying each dimension of a prism by 3.**

- Find the volume of the prism.
- Find the volume of the prism after each dimension is multiplied by 3.
- Describe the effect on the volume of multiplying each dimension of a prism by 3.



$B = 2\text{ft}^2$   $V = 10\text{ft}^3$   
 $l \cdot w = 1 \cdot 2 = 2$  |  $Bh = (2)(5) = 10$   
 $B = 18\text{ft}^2$   $V = 270\text{ft}^3$   
 $l \cdot w = 3 \cdot 6 = 18$  |  $Bh = (18)(15) = 270$

$3^3 = 27$  It was 27 times bigger than the original