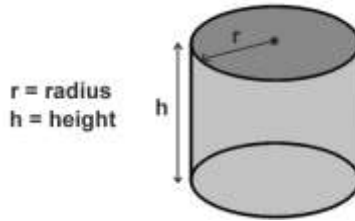
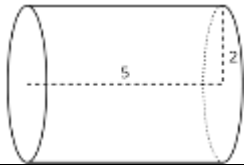


## Volume Cylinders

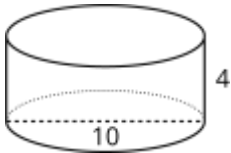


The **volume** of a cylinder (rectangular cylinder) is given by the equation  $V = \pi r^2 h$ .  $r$  is the radius and  $h$  is the height. What you should notice is that the area of a circle is  $\pi r^2$ . A cylinder multiplies the area of a circle by the height.

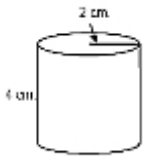
1. Find in terms of  $\pi$  the volume of the cylinder.



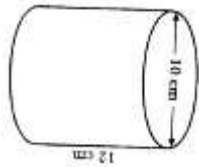
2. Find the volume of the cylinder to the *nearest 10<sup>th</sup>*.



3. Find in terms of  $\pi$  the volume of the cylinder.



4. Find the volume of the cylinder to the *nearest 10<sup>th</sup>*.



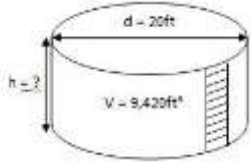
5. Show any computations you do to get the answer.

A water tank is in the shape of a right circular cylinder with a height of 20 feet and a volume of  $320\pi$  cubic feet. What is the diameter, in feet, of the water tank?

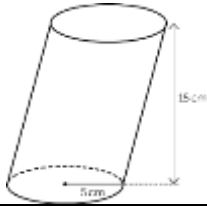
- A 16
- B 10
- C 8
- D 4

6. A cylindrical tank has a radius of 7 and a height of 20 meters.  
A water truck can fill the tank  $\pi$  cubic meters every minute.  
**How long will it take to fill the tank completely?**
- 

7. Find the height of the swimming pool. *Nearest foot.*

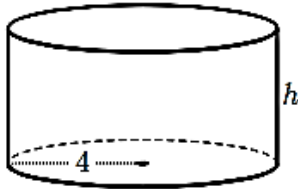


8.  $h=15$  and  $r=5$ . Find volume of the slanted cylinder.



9.  
**SWIMMING POOL** A cylindrical swimming pool has a diameter of 16 feet and a height of 4 feet. About how many gallons of water can the pool contain?  
Round your answer to the nearest whole number. ( $1\text{ ft}^3 \approx 7.5\text{ gal}$ )
- 

10.  
A cylinder with radius 4 units is shown below. Its volume is 201 cubic units.



Find the height of the cylinder.  
Use 3.14 for  $\pi$  and round your final answer to the nearest hundredth.

---