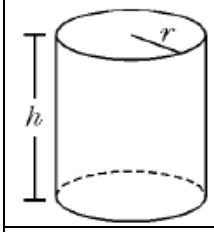
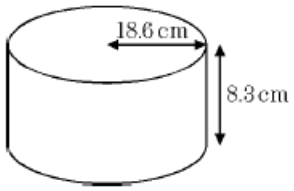
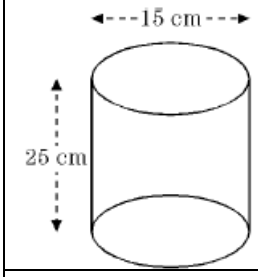
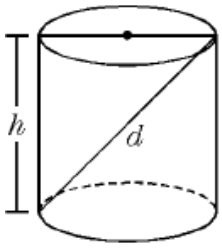
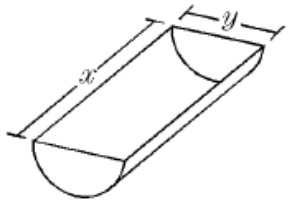
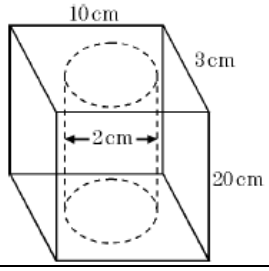
Name:_____ Date:_____

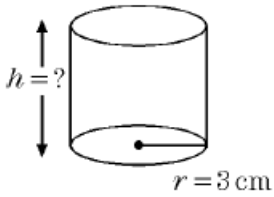
HW Math 8 Section 9.3 Volume of Cylinders

1. Given each cylinder, find the volume:

a) $h = 5cm,\ r = 3cm$ 	b) 
c) 	d) $h = 32cm,\ d = 40cm$ 
e) $x = 15cm,\ y = 4cm$ 	f) 

2. There are two cylinders that carry candy in them. One cylinder is 25cm tall and has a radius of 15cm. The second cylinder has a height of 15cm tall and a radius of 15cm. Which cylinder has a bigger volume?

3. If the volume of the following cylinder is $108cm^3$, then what is the height?



4. A cylindrical water tank is 1/5 full. If three liters were added, the tank would be 1/4 full. How many liters does the tank hold when it is full? If the height of the cylinder is 50cm, what is the radius of the cylinder? [Note: *1L=1000ml=1000cm^3*]

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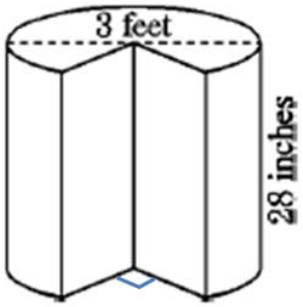
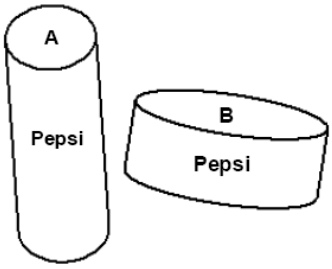
5. What is the volume of the solid below if a right triangle



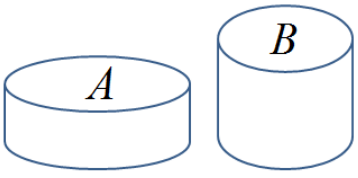
6. A pipe is 2 meters long and has inside radius of 5 cm and outside radius of 6 cm. Find the volume of metal contained in the pipe to the nearest cubic centimetre

7. The lateral surface area of a cylindrical tube with a height of 6 cm is 48π cm^2. In cubic centimeters, what is the tube's volume? Express your answer in terms of π.

8. A soft drink company has two different cans. One container is twice as wide as another but only half as tall. Which container has a bigger volume? A or B? Do they hold the same amount?



9. Challenge: Cylinder B's height is equal to the radius of cylinder A and cylinder B's radius is equal to the height (*h)* of cylinder A. If the volume of cylinder A is twice the volume of cylinder B, the volume of cylinder A can be written as $V = N \times \pi \times h^3$ cubic units. What is the value of N?



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