Name Key Date _____ Pd _____

11.5 Volume of Prisms & Cylinders CYU

☑ Use when you get it right all by yourself

S Use when you did it all by yourself, but made a silly mistake

H Use when you could do it alone with a little help from teacher or peer

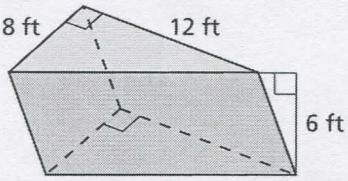
G Use when you completed the problem in a group

X Use when a question was attempted but wrong (get help)

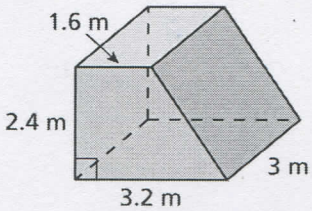
N Use when a question was not even attempted

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Volume of prisms	1, 2	6	8, 9
Volume of cylinders	3, 4	5, 7	10
Density		5	12
Volume of composite figures			11

Find the volume of the prism.

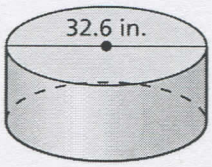
1. 

$288 ft^3$

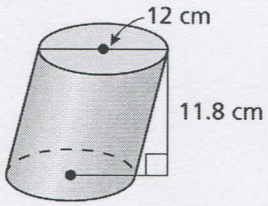
2. 

$\approx 17.28 m^3$

Find the volume of the cylinder.

3. 

$\approx 10{,}433.622 in^3$

4. 

$\approx 1334.549 cm^3$

Density with a cylinder.

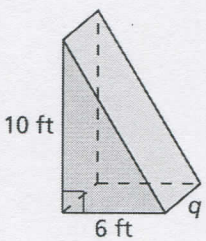
5. A cylindrical container with a radius of 8 centimeters is filled to a height of 10 centimeters with sulfuric acid. The density of sulfuric acid is 1.84 grams per cubic centimeter. What is the mass of the sulfuric acid to the nearest gram?

$\approx 3{,}699.540 g$

Find the missing dimension.

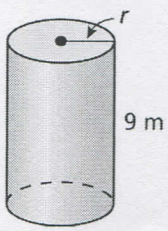
6. Volume = 120 ft^3

4 ft



7. Volume = 254.5 m^3

$r \approx 3m$



Find the area of the base of the rectangular prism with the given volume and height. Then give a possible length and width.

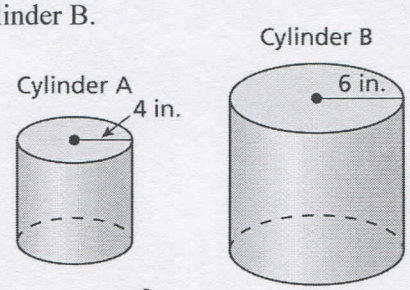
8. $V = 216 \text{ yd}^3$, $h = 12 \text{ yd}$

$l = 9 \text{ yd}$
$w = 2 \text{ yd}$

9. $V = 448 \text{ in.}^3$, $h = 14 \text{ in.}$

$l = 4 \text{ in}$
$w = 8 \text{ in}$

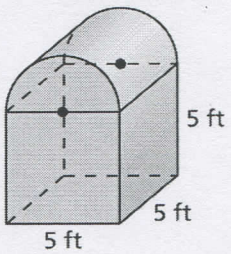
10. The cylinders are similar. Find the volume of Cylinder B.



$V = 112\pi \text{ in.}^3$

$378\pi \text{ in}^3$

11. Find the volume of the composite solid.



$\approx 174.087 \text{ ft}^3$

Density with a prism.

12. An aquarium shaped like a rectangular prism has a length of 24 inches, a width of 12 inches, and a height of 18 inches. You fill the aquarium half full with water. When you submerge a rock in the aquarium, the water level rises 0.5 inch. Find the volume of the rock.

$V_{rock} = 144 \text{ in}^3$

CYU Reflection: *How far can you go: basic, intermediate, or advanced?*

Rate your mastery level!

How confident are you with the skills this CYU covered? Circle the score you would give yourself.