

May 27, 2011

We only have single digit  
days left of school!

Today's Agenda ~

Correct Surface Area  
of Cylinders worksheet  
Cylinder Volume notes

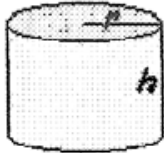
Homework: Cylinder Volume worksheet

# Find the Surface Area

NAME Key

$$A = 2\pi rh + 2\pi r^2$$

$$1) A = 2\pi 9 \cdot 4 + 2\pi 9^2$$

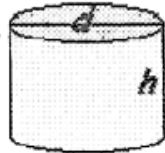


$$= 734.76$$

radius = 9

height = 4

$$2) A = 2\pi 3.5 \cdot 11 + 2\pi 3.5^2$$

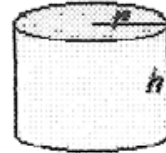


$$= 318.71$$

$r = 7 \div 2 = 3.5$   
diameter = 7

height = 11

$$3) A = 2\pi 5 \cdot 20 + 2\pi 5^2$$

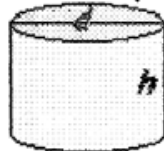


$$= 785$$

radius = 5

height = 20

$$4) A = 2\pi 1 \cdot 8 + 2\pi 1^2$$



$$= 56.52$$

radius =  $2 \div 2 = 1$   
diameter = 2

height = 8

$$5) A = 2\pi 6 \cdot 15 + 2\pi 6^2$$



$$= 791.28$$

radius = 6

height = 15

$$6) A = 2\pi 2 \cdot 14 + 2\pi 2^2$$



$$= 200.96$$

radius = 2

height = 14

$$7) A = 2\pi 8 \cdot 10 + 2\pi 8^2$$



$$= 904.32$$

radius = 8

height = 10

$$8) A = 2\pi 1 \cdot 13 + 2\pi 1^2$$

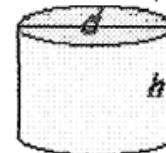


$$= 87.92$$

radius =  $2 \div 2 = 1$   
diameter = 2

height = 13

$$9) A = 2\pi 4.5 \cdot 10 + 2\pi 4.5^2$$



$$= 409.77$$

radius =  $9 \div 2 = 4.5$   
diameter = 9

height = 10

Student Name: \_\_\_\_\_

Score: \_\_\_\_\_

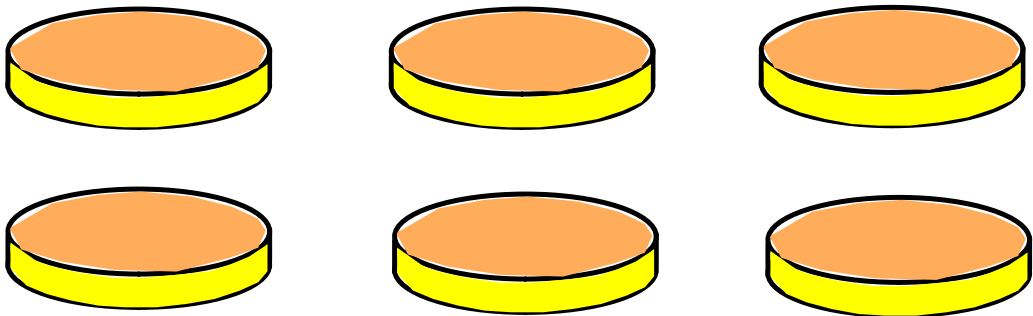
<b>Surface Area of a cylindrical prism</b>
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Work Space

Find the surface area of a cylindrical prism with radius 5 cm and height 8 cm.	$A = 2\pi 5 \cdot 8 + 2\pi 5^2$
Answer: $408.2 \text{ cm}^2$	
Diameter and height of a cylinder is 5 feet and 12 feet respectively. Find the surface area of a cylinder.	$D = 5 \text{ ft} \quad R = 5 \div 2 = 2.5$ $H = 12 \text{ ft}$ $A = 2\pi 2.5(12) + 2\pi 2.5^2$
Answer: $227.65 \text{ ft}^2$	
Radius = 3.2 yard; Height = 7 yard. Find the surface area of a cylinder.	$A = 2\pi 3.2 \cdot 7 + 2\pi 3.2^2$
Answer: $204.98 \text{ yd}^2$	
Find the surface area of a cylindrical prism with diameter 6 inches and height 7.5 inches.	$D = 6 \text{ inches} \quad R = 6 \div 2 = 3$ $H = 7.5 \text{ inches}$ $A = 2\pi 3 \cdot 7.5 + 2\pi 3^2$
Answer: $197.82 \text{ in}^2$	
Find the surface area of a cylindrical tank with radius 4 ft and height 7.2 feet. Round the answer to the nearest hundredth place.	$A = 2\pi 4 \cdot 7.2 + 2\pi 4^2$
Answer: $281.34 \text{ ft}^2$	

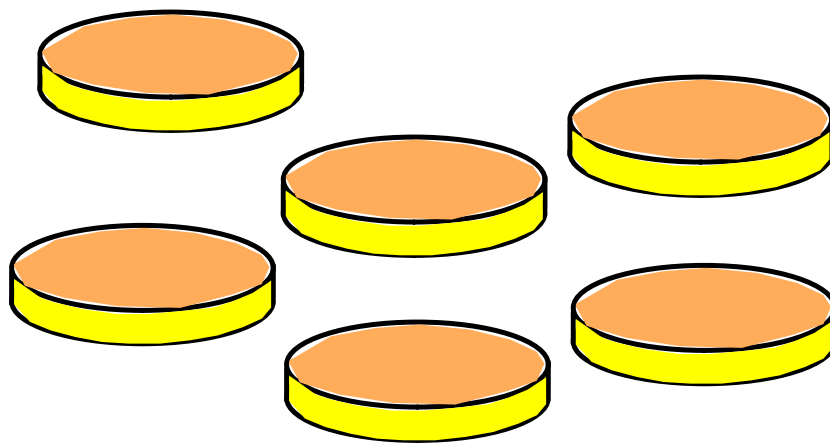
Cylinders can be made by stacking discs.

Watch the cylinder be made...



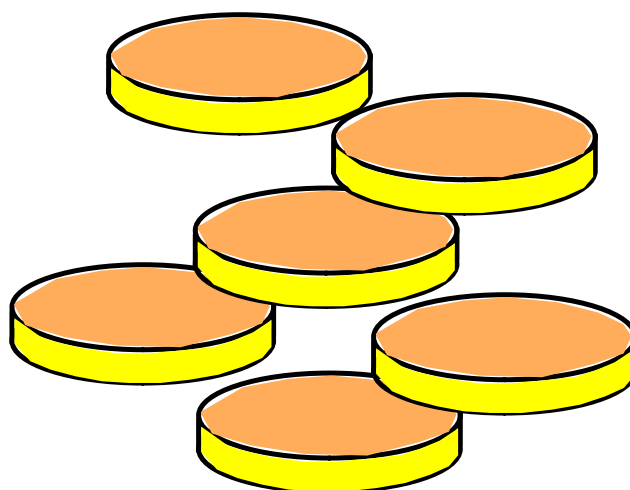
Cylinders can be made by stacking discs.

Watch the cylinder be made...



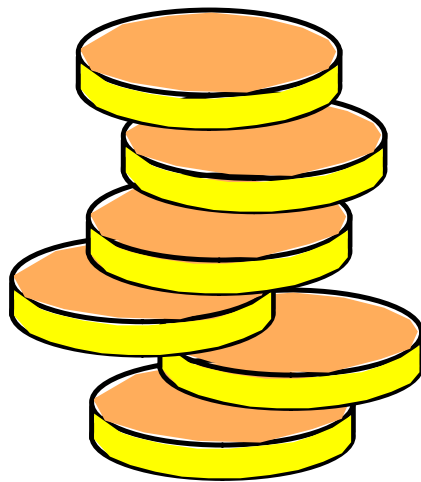
Cylinders can be made by stacking discs.

Watch the cylinder be made...



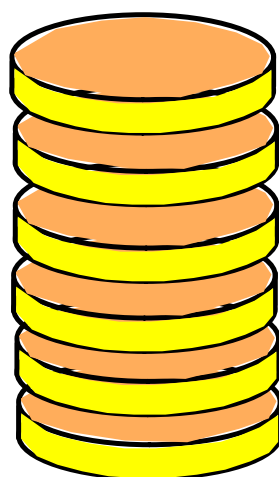
Cylinders can be made by stacking discs.

Watch the cylinder be made...



Cylinders can be made by stacking discs.

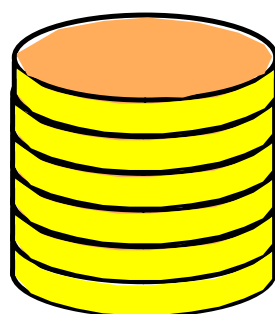
Watch the cylinder be made...





Cylinders can be made by stacking discs.

Watch the cylinder be made...



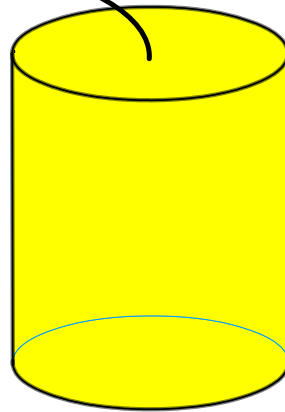
To find the Volume of a Cylinder,  
use this formula

$$V = Bh$$

B = area of base

h = height

V = Volume

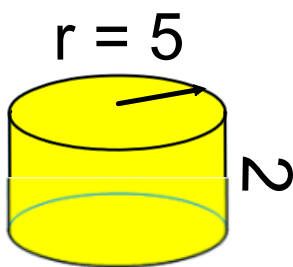
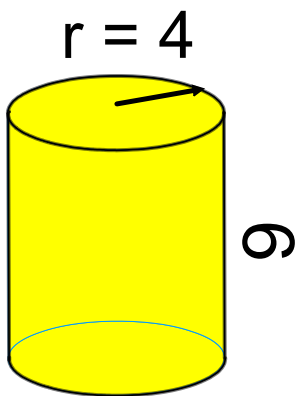
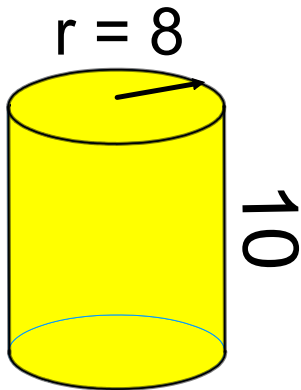


$$V = \underline{B}h$$

$$V = \pi \cdot r^2 \cdot h$$

So let's practice...

Find the volume of these cylinders.



$$V = \pi \cdot r^2 \cdot h$$

$$V = \pi \cdot 8^2 \cdot 10$$

$$V = 2009.6$$

$$V = \pi \cdot r^2 \cdot h$$

$$V = \pi \cdot 4^2 \cdot 6$$

$$V = 301.44$$

$$V = \pi r^2 h$$

$$V = \pi \cdot 5^2 \cdot 2$$

$$V = 157$$

Homework:  
Cylinder Volume worksheet

