Ms. Thomases Days 11-20 8th grade Math Resource
NTI Assignments

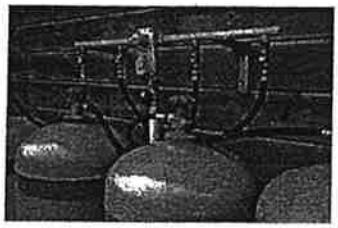
Days 16-20: *Hello! Hope everyone is well. I **STILL** miss you all*  .

This week you will apply some of those mad calculator and formula skills and put them to the test. Introducing: Volume of Cylinders. In this unit you will know what a cylinder is

If you need any help please:

- call me at 234-7123 or
- Call or text at my personal cell phone # of 859-298-8096 (try this first)
- Or face time me

Day 15: Do Task 1-3. COmplete Task 1 and 2 here and #3 is side project.

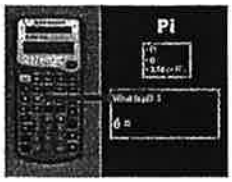
Task 1: Find 3 cylinders in your home and write them below Ex.  1. _____ 2. _____ 3. _____	Task 2: Watch a fun little video demonstrating volume of a cylinder if you have the technology for it. https://www.youtube.com/watch?v=dujEcT2NU6A 
#3 Can you make a cylinder out of paper? Google search : making cylinder's out of paper. You will need a ruler, paper, scissors and pencil likely  Take a pic of it and send it to me.	**#4** That's it for today

Day 16:

Task 1 :
https://www.youtube.com/watch?v=y3TjAHV7esk
Watch video link here:

Calculator keys needed:

1. Pi



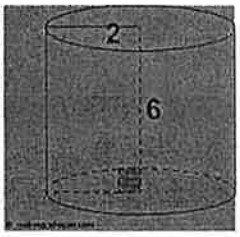
or use 3.14

2. X to the 2nd power key

3. X multiplication key

Do Task 2 here: When radius is given

For π use 3.14



$V = \pi r^2 h$

$V = 3.14 \times 2^2 \times 6$

or

$3.14(2^2)(6)$

or

$3.14(2^2)6$

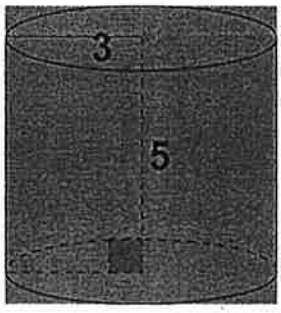
$3.14(2^2) \times 6$

Try them all see if you get same #

$V =$

Do Task #3 here: When radius is given

use 3.14 for π

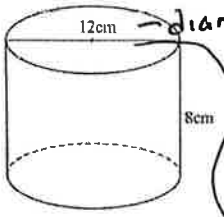


$V = \pi r^2 h$

$V = 3.14 \times 3^2 \times 5$

$V =$ ____ ^{3}

Do Task 4 here: When diameter is given



$V = \pi r^2 h$

1st take ½ of 12 or $12 \div 2 = 6$

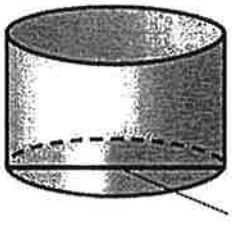
$r = 6$

$V = \pi r^2 h$

$V = 3.14(6^2)8$

$V =$ ____ cm^3

Do task 5 here: use 3.14 for pie



$V = 3.14(\ )^2 6$

$V =$ ____ in^3

Do task 6 here:

Draw your own cylinder and choose number for the height and the radius

Solve for volume

Day 17

Pages 4 and 5

COmplete 1-3 the Volume of CYlinders from Maneuvering the Middle LLC, 2016.
Complete Volume of a Cylinder from math worksheet.com

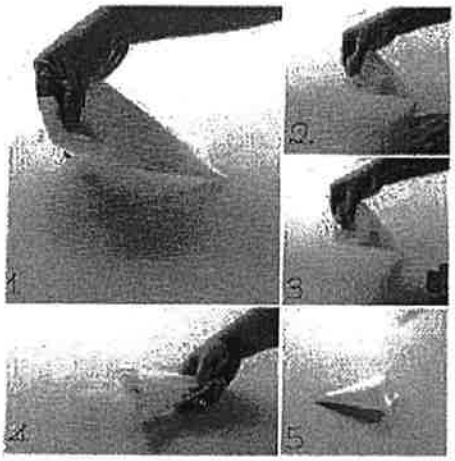
Day 18

Task 1:

Watch video:
https://www.youtube.com/watch?v=yfuHUBDH2T0

If can't view go to task 2

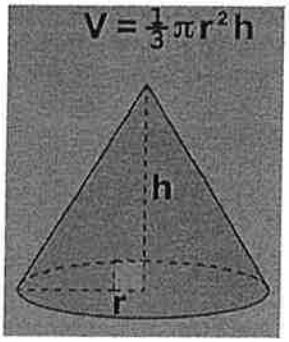
Task 2:



Make a cone hat out of paper:

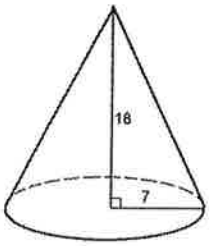
https://www.youtube.com/watch?v=5x2dQAY6ea0
Or
https://www.instructables.com/id/Paper-Cone/

Task 3: Volume of a cone



CALCULATOR :
SAYS: 1 divided by 3 times 3.14 times radius times height
(⅓ x 3.14 x r x h)

Task 4



Task 5

Page 6 & 7

Complete the Volume of Cone worksheet

Day 19

Task 1: Solve for volume of a cone even number Page 8

Task 2: SOlve for volume of a cylinder even numbers Page 9

Unit: Volume
Student Handout 1

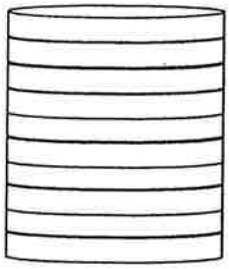
Day 17

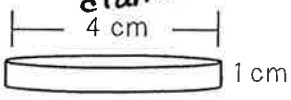
Name _____

Date _____ Pd____

VOLUME OF CYLINDERS

A cylindrical stack of coins is shown below. The dimensions of an individual coin are shown as well.

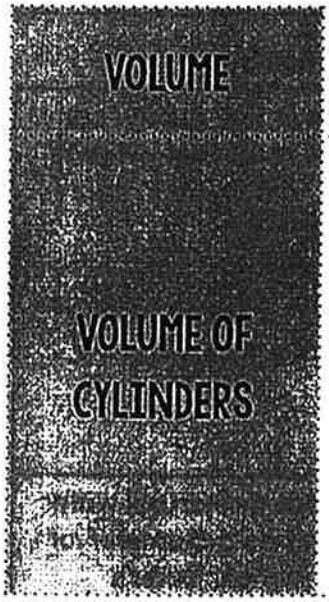




If you needed to find the amount of space taken up by the stack of coins, how could you use the dimensions of the individual coin to help?

Cylinder: Formula

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



- Volume is the amount of 3-dimensional space occupied by an object. Volume can also be referred to as capacity.
- To find the volume of a cylinder, multiply the area of the base by the height of the cylinder.
- The formula can be written as V = Bh. Describe each variable:

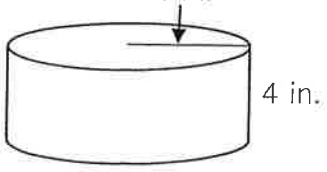
  V = Volume of the Cylinder

  B = Base Area

  h = Height of a Cylinder
- The base of a cylinder will always be a circle, so to find the area of the base, use the formula πr^2.

Find the volume of each cylinder. Use 3.14 for π. $V = \pi r^2 h$

1.

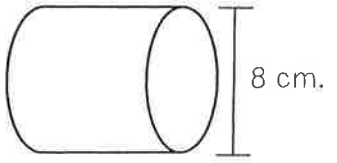


Formula: $V = \pi r^2 h$

Plug in values: _____

Volume: _____

2.

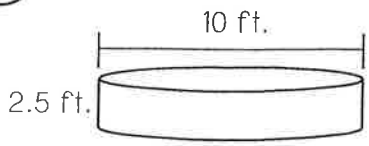


Formula: _____

Plug in values: _____

Volume: _____

3.



Formula: _____

Plug in values: _____

Volume: _____

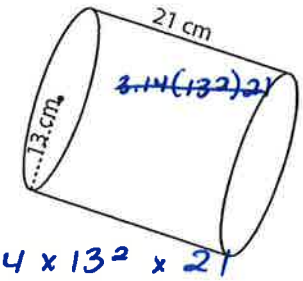
Name : _____ Day 17 Score : _____ 5

Volume - Cylinder

$V = \pi r^2 h$

Find the volume of each cylinder. (use $\pi = 3.14$)

1)

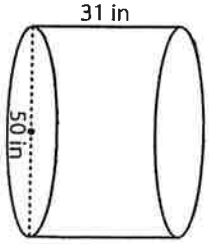


~~3.14(13²)21~~

3.14 x 13² x 21

Volume = _____

2)

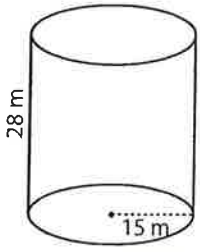


r = 25

3.14 x 25² x 31

Volume = _____

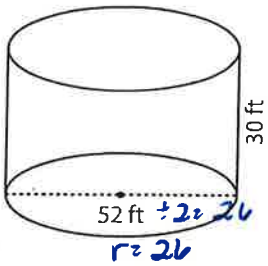
3)



3.14 x 15² x 28

Volume = _____

4)



÷2 → 26

r = 26

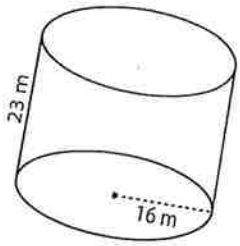
3.14 x 26² x 30

Volume = _____

5)

Volume = _____

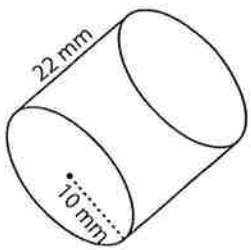
6)



3.14 x 16² x 23

Volume = _____

7)



Volume = _____

8)

10) Find the amount of wax required to make a candle with radius 22 millimeter and height 61 millimeter.

Volume = _____

60837.5 in^3	18488.32 m^3
63679.2 in^3	4832.46 cm^3
6908 mm^3	19782 m^3

Day 18

Unit: Volume
Student Handout 2

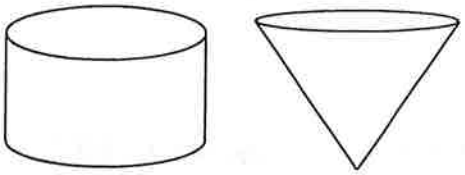
Name _____

Date _____ Pd_____

VOLUME OF CONES

EXAMPLE 1:

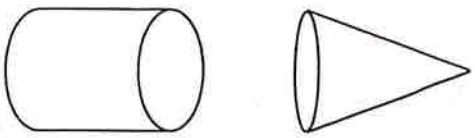
The cylinder and cone below have the same radius and the same height.



$V = 120$ IN.^{3} $V = 40$ IN.^{3}

EXAMPLE 2:

The cylinder and cone below have the same radius and the same height.



$V = 90$ IN.^{3} $V = 30$ IN.^{3}

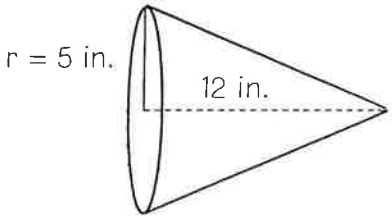
Using the examples above, what do you notice about the volume of a cone compared to the volume of a cylinder with the same radius and the same height?

$V = \frac{1}{3}\pi r^2 h$ 1 ÷ 3 x 3.14 x r(x²)h

- The volume of a cone will always be _____ the volume of a cylinder with the same height and radius.
- The formula for the volume of a cone is _____, or _____.
- Since the base of a cone is a circle, the area of the base is found by using _____.

Find the volume of each cone below. Use 3.14 for π.

1.

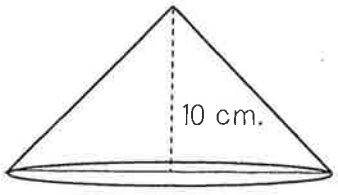


Formula: $\frac{1}{3}\pi r^2 h$

Plug in values: $\frac{1}{3} \times 3.14 \times 6^2 \times 12$

Volume: 314 in^3

2.



Formula: $\frac{1}{3}\pi r^2 h$

Plug in values: _____

Volume: _____

Unit: Volume
Homework 2

Day 18

Name _____

Date _____ Pd _____

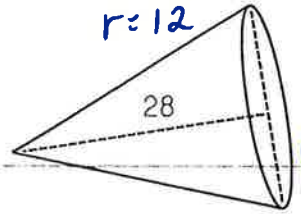
$V = \frac{1}{3}\pi r^2 h$

VOLUME OF CONES

Find the volume of each cone. Use 3.14 for π and round answers to the nearest tenth. Match each answer to a letter below to help you solve the riddle.

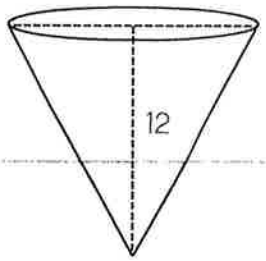
1.

2. 24 ÷ 2 = 12, r = 12

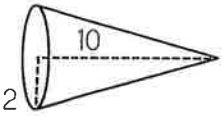


r = 12

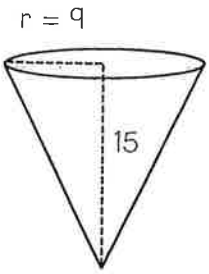
3. d = 11, r = 5.5



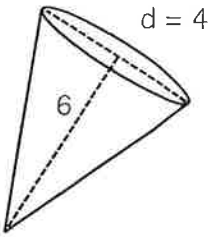
4.



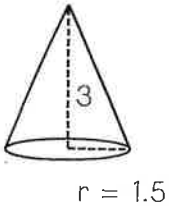
5.



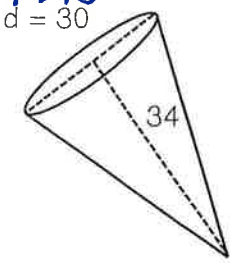
6. r = 2



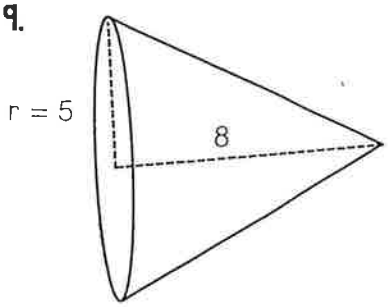
7.



8. r = 15



9.



G 107.2 u^3	D 1271.7 u^3	O 623 u^3	T 379.9 u^3	E 7.1 u^3	A 25.1 u^3
E 4,220.2 u^3	S 718 u^3	H 209.3 u^3	U 21.3 u^3	P 321.6 u^3	I 8,007 u^3

WHY WOULD A PRISM BEAT A SPHERE IN A COMPETITION?

8	3		9	6	1		3	9	2		7	5	4	2

Volume of Cones

Day 19. Evens

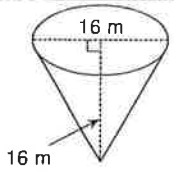
Name_____

$V = \frac{1}{3}\pi r^2 h$

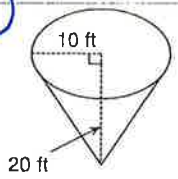
Show work.

Find the volume of each figure. Round your answers to the nearest whole, if necessary.

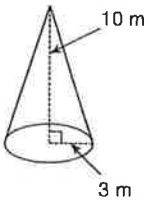
1)



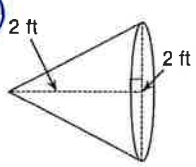
2)



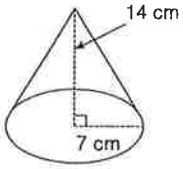
3)



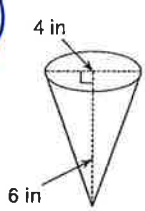
4)



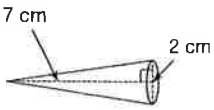
5)



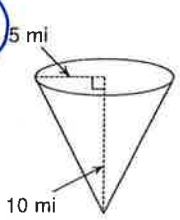
6)



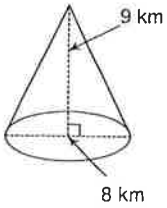
7)



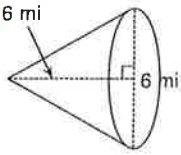
8)



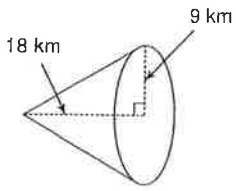
9)



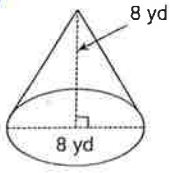
10)



11)



12)



Volume of Cylinders

Day 19 Even

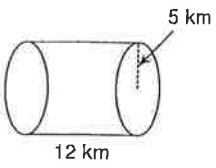
Name_____

9

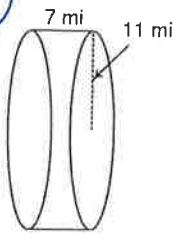
$V = \pi r^2 h$

Find the volume of each figure. Round your answers to the nearest ~~thousandth~~ tenth, if necessary. Show work

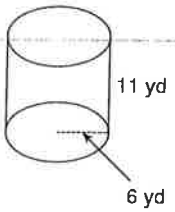
1)



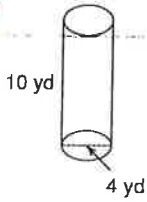
2)



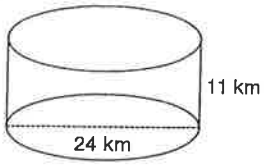
3)



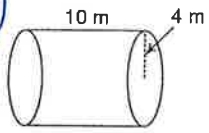
4)



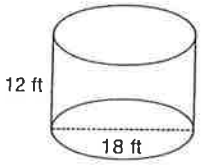
5)



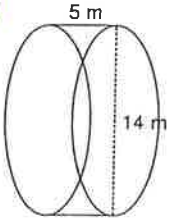
6)



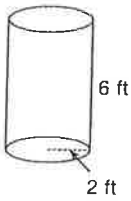
7)



8)



9)



10)