

**Due: Tuesday, December 6<sup>th</sup> 2016**

Each section has a released question from the NYS Math 8 test. The questions surrounding it help you think about the various skills needed to solve the problem. Answer all questions. Show ALL Work.

3 feet = \_\_\_\_\_ inches

72 inches = \_\_\_\_\_ feet

42 inches = \_\_\_\_\_ feet

**4.5 feet = \_\_\_\_\_ inches**

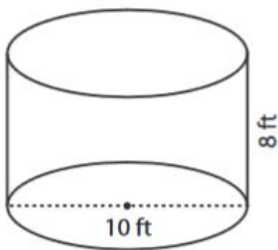
5 yards = \_\_\_\_\_ feet

72 inches = \_\_\_\_\_ yards

3 feet + 15 inches = \_\_\_\_\_ inches

**4.5 feet - 6 inches = \_\_\_\_\_ inches**

Find the Volume of the below cylinder.  
Round to the nearest cubic foot.

**Remember:**  $V = \pi r^2 h$ 

Elias filled the cylinder to the left with sand to make a sandbox. The sand came up 18 inches from the top of the cylinder.

**What is the height of the sand in the cylinder?**

**Use this height and the same diameter to find the volume of the sand in the cylinder to the nearest cubic foot.**

### *NYS Test Question*

**Show ALL Necessary Work HERE. Even if some of the work is above.**

An above-ground swimming pool in the shape of a cylinder has a diameter of 18 feet and a height of 4.5 feet. If the pool is filled with water to 6 inches from the top of the pool, what is the volume, to the nearest cubic foot, of the water in the pool?

- A) 226
- B) 452
- C) 1,018
- D) 4,072

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Simplify the following

$3(2x+5)=$

$-3(5x-2y-7z)=$

$\frac{1}{2}(-6a+10b)=$

What is the above property called? \_\_\_\_\_

Simplify the following

$2a + 5b - 3a + 4b$

$-4(x-2y) - 5x + 10y$

Solve the following equations for x. Write how many solutions each equation has.

**One  
Solution****No  
Solutions****Infinitely Many  
Solutions**

$3x + 5 = 3x + 2$

\_\_\_\_\_

$2(3x + 4) = 32$

\_\_\_\_\_

$2x + 5x + 4 = -2 + 7x + 6$

\_\_\_\_\_

*NYS Test Question*

**Show ALL Necessary Work HERE.  
Even if some of the work is above**

Determine the number of solutions that exist to the equation below.

$8(j-4) = 2(4j-16)$