**8th Grade Math Packets (Green & White Teams) – Days 6 – 10**

**Day 6**

**Volume of a Cylinder – Read the instructions, then choose ONE of the 2 options listed.**

**Instructions:**

* If you have internet access, the following video is very helpful: <https://www.khanacademy.org/math/basic-geo/basic-geo-volume-sa/volume-cones/v/cylinder-volume-and-surface-area>
* From your textbook: Volume of a Cylinder = π ∙ r2 ∙ h

π = 3.14

r = radius of the circle

h = height

**Option 1 (choose ONE of the options):**

* Complete the following 4 problems on your own paper: <https://www.khanacademy.org/math/basic-geo/basic-geo-volume-sa/volume-cones/e/volumes-of-cones--cylinders--and-spheres>

**Option 2 (choose ONE of the options):**

* Think of 4 real-world objects that are cylinders. List the name of the item (toilet paper roll, paper towel roll, soup can, pop can, etc), measure (or make up a realistic measurement) the radius and height of the item, and then calculate the volume.

**Day 7**

**Volume of a Cone – Read the instructions, then choose ONE of the 2 options listed.**

**Instructions:**

* If you have internet access, the following video is very helpful:

<https://www.khanacademy.org/math/basic-geo/basic-geo-volume-sa/volume-cones/v/volume-cone-example>

* From your textbook: Volume of a Cone = $\frac{1}{3}$ ∙ π ∙ r2 ∙ h

π = 3.14

r = radius of the circle

h = height

**Option 1 (choose ONE of the options):**

* Complete the following 4 problems on your own paper: <https://www.khanacademy.org/math/basic-geo/basic-geo-volume-sa/volume-cones/e/volume-of-cones>

**Option 2 (choose ONE of the options):**

* Think of 4 real-world objects that are cones. List the name of the item (traffic cone, birthday hat, ice cream cone, etc), measure (or make up a realistic measurement) the radius and height of the item, and then calculate the volume.

**Day 8**

**Volume of a Sphere – Read the instructions, then choose ONE of the 2 options listed.**

**Instructions:**

* If you have internet access, the following video is very helpful: <https://www.khanacademy.org/math/basic-geo/basic-geo-volume-sa/volume-cones/v/volume-of-a-sphere>
* From your textbook: Volume of a Sphere = $\frac{4}{3}$ ∙ π ∙ r3

π = 3.14

r = radius of the sphere (from the CENTER to the outside edge)

**Option 1 (choose ONE of the options):**

* Complete the following 4 problems on your own paper:

<https://www.khanacademy.org/math/basic-geo/basic-geo-volume-sa/volume-cones/e/volume-of-spheres>

**Option 2 (choose ONE of the options):**

* Think of 4 real-world objects that are spheres. List the name of the item (baseball, basketball, softball, etc), measure (or make up a realistic measurement) the radius of the item, and then calculate the volume.

**Day 9**

**Volume of Cylinder, Cone and Sphere – Draw and label a picture of the item in the word problem. Then calculate the volume.**

1. A tank on a road roller is filled with water to make the roller heavy. The tank is a cylinder that has a height of 6 feet and a radius of 2 feet. One cubic foot of water weighs 62.5 pounds. Find the weight of the water in the tank.
2. If you have a cone shaped vase that is 4.8 inches in diameter and 10 inches in height, how much water can it hold?
3. A globe of the Moon has a radius of 10 inches. Find the volume of the globe. Round your answer to the nearest whole number.
4. A cylindrical container of three rubber balls has a height of 18 centimeters and a diameter of 6 centimeters. Each ball in the container has a radius of 3 centimeters. Find the amount of space in the container that is not occupied by rubber balls. Round your answer to the nearest whole number.

**Day 10** – **Find the volume of Robby the Robot. You can draw a picture of the robot if you want. ☺**

