Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per.\_\_\_\_\_\_\_ Score:\_\_\_\_\_

### U13 HW #1 *Volume of 3D Shapes*

**Directions:** Find the volume for each shape described below.

**Volume of a Cylinder** – What is the formula? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| --- | --- |
| **2.5 cm**  **10 cm** | 1. Cylinder with a diameter of 2.7 m and a height of 30 m. |
| 1. Mr. Riley bought 2 cans of paint to paint his garage. Each can has a radius of 5.5 inches and a height of 8 inches. How many cubic inches of paint did he buy in all? | 1. The water pipe has a radius of 5 cm and a height of 7 cm. What volume of water does it take to fill the pipe? |

Volume of Cones– What is the formula? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| **2 yd**  **8 yd** | 1. A cone with a diameter of 4.2 meters and a height of 5 meters. |
| 1. A stalactite, a geological formation, in the Endless Caverns in Virginia is cone-shaped. It is 4 feet long and has a diameter at its base of 1.5 feet.   a. Assuming that the stalactite forms a perfect cone, find the volume of the stalactite.  b. The stalactite is made of calcium carbonate, which weighs 131 pound per cubic foot. What is the weight of the stalactite? | |

**Volume of Spheres** – What is the formula? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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|  | 1. A sphere with a diameter of 62.5 inches. |
| 1. Find the volume of the empty space in a cylindrical tube of three tennis balls. The diameter of each ball is 2.5 inches. The cylinder is 2.5 inches in diameter and is 7.5 inches tall. Hint: find the volume of the cylinder and spheres. | |