Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_\_\_ Period: \_\_\_\_\_\_ Date: \_\_\_\_\_

**8.1A Volumes of Cylinders\_Classwork**

*Objective: Find the volume of a cylinder. Solve word problems involving volume of cylinders. CCSS: 8.G.9*

YOUTUBE VIDEO: [https://www.youtube.com/watch?v=Bb\_XJ7UPDlM](https://ex2010.sandi.net/owa/redir.aspx?C=-YQZAcp8qM0S75R4aQ3vkcSXLuaVtPSHtxrpUOIDvyMlS4y1Ev3TCA..&URL=https%3a%2f%2fwww.youtube.com%2fwatch%3fv%3dBb_XJ7UPDlM)

\*\*READ Examples 1 and 2 on p. 336\*\*

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| FORMULA FOR VOLUME OF A CYLINDER: $V= πr^{2}h$ |

**FIND THE VOLUME FOR THE CYLINDERS. ROUND TO THE NEAREST TENTH.**

|  |  |
| --- | --- |
| **1** | **2** |
| **3** | **4** |
| **Example 1: HOW MUCH SALSA IS MISSING FROM THE JAR?**The height of the jar is \_\_\_\_ cm. There is \_\_\_ cm in length of salsa remaining in the jar.Therefore the empty space height is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.The radius of the jar is \_\_\_\_\_\_\_ cm. The VOLUME FOR THE EMPTY SPACE IS …  |

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| **Example 2: About how many gallons of water does the watercooler bottle contain?** $\left(1 ft^{3}≈7.5 gal.\right)$ **Round to the nearest hundredth.** |
| 1. A jelly jar has a radius of 3 centimeters and a height of 8 centimeters. The jelly remaining in the jar has a height of 3 centimeters. How much jelly is missing from the jar?  |
| 2. A cylindrical tower has a diameter of 15 meters and a height of 5 meters. About how many gallons of water can the tower contain? (1 m3 $≈$ 264 gal).  |

**Solutions: 1**. about 141.4 cm3 **2.** 233,263 gal