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

**8.3A NOTES – Volume of Spheres**

*Objective: Students can use the formula for volume of a sphere to find the volume and the radius CCSS: 8.G.9*

*HW: (8.3A) p. 352 #3 – 12 (solutions on p. A35)*

**WARM-UP** DIRECTIONS: SOLVE THE FOLLOWING EQUATIONS

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| 1. 6x + 7 = 31
 | 1. $\frac{x}{3}=12$
 |

<https://www.youtube.com/watch?v=YNutS8eIhEs#t=4.083671>

ROUND TO THE NEAREST TENTH.

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| **FORMULA FOR VOLUME OF A SPHERE:** $V= \frac{4πr^{3}}{3}$ **or** $V= \left(4πr^{3}\right)÷3$ |
| **EXAMPLE 1:** Find the volume of the sphere |
| **EXAMPLE 2:** FIND THE RADIUS OF A SPHERE WITH VOLUME **36**$ π$ **in.3** | **Example 2B:** Find the radius of a sphere with volume $\frac{729}{6}π$ |

BACK 🡪

**ON YOUR OWN:** Find the volume V or radius r of the sphere. Round your answer to the nearest tenth, if necessary.

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|  | 1b. A snow globe has a diameter of 3cm. What is the volume of the snow globe? |
| 2a. Find the radius of the sphere with the given volume. **VOLUME = 288**$ π$ **m3** | 2b. A softball has a volume of $\frac{343}{6}π$ cubic inches. Find the radius of the softball. |

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| 3. You have an ice cream scoop with a 2-inch diameter. You have an ice cream cone with a 2-inch  diameter and a height of 5 inches. If you place one scoop of ice cream on the cone and let the  ice cream melt, will it spill over the cone? Explain. |