Volume of Sphere &
Real World Volume Problems

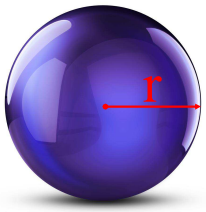
Today's Learning Targets:

4.9 I can recall and use the formula to find the volume of a sphere.

4.10 I can solve real-world problems involving the volume of cylinders, cones, and spheres.

Volume of a Sphere

V = $\frac{4}{3}\pi r^3$



What is the volume of the given sphere in cubic inches?

Step 1: State the **Formula**

Step 2: Fill in the formula with **numbers**

Step 3: Crunch the numbers

Step 4: **Label** your answer

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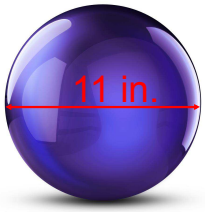


$V = \frac{4}{3}\pi r^3$

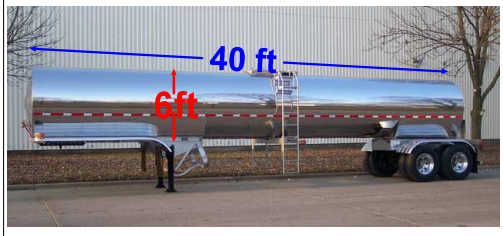
Real-World Situations!!

How many <u>gallons</u> does this tanker hold?

Step 1: **What is the shape and it's formula?**

Step 2: Fill in the formula with **numbers**

Step 3: Crunch the numbers



$1\ ft^3 \approx 7.5\ gal$

What is the volume of an ice cream cone that is 4.5 cm high and has a diameter of 3 cm?

Step 1: Draw a picture then solve.

Step 2: **What is the shape and it's formula?**

Step 3: Fill in the formula with **numbers**

Step 4: Crunch the numbers

Approximately how many moons would fit in the earth?

Step 1: **What is the shape and it's formula?**

Step 2: Fill in the formula with **numbers**

Step 3: Crunch the numbers

r_m = 1,079.5 mi
r_e = 3,963 mi