## Volume of a Sphere Week 7  
### Day 1

<table>
<thead>
<tr>
<th>Pre-Requisite Skills Needed</th>
<th>Teacher Example:</th>
<th>You Try:</th>
</tr>
</thead>
</table>
| **Multiplying Decimals**    | **Find the Product**  
2.95 · 3.2  
1. Multiply, ignoring decimals  
2. Count units after decimals  
3. Add all counted units  
4. Use counted units for location of decimal in answer (start from the right)  
2.95 \(\times\) 3.2  
\[\begin{array}{c|c|c}
& & \\
\hline
& 2.95 & 3.2 \\
\hline
\end{array}\]  
590 
\[\begin{array}{c|c|c|c}
& & & \\
\hline
& 8 & 8 & 5 & 0 \\
\hline
\end{array}\]  
9.440  
\[\begin{array}{c|c|c|c}
& & & \\
\hline
& 3 & 3 & units \\
\hline
\end{array}\]  | **Find the product of each expression.** *(Show your work below)* |
| 1) 126.45 · 2.6 |
| 2) 289.8 · 2.3 |

| **Dividing Decimals**    | Teacher Example:  
\[
\begin{array}{c|c|c|c |c|c|c|c|c}
& & & & & & & & & & \\
\hline
& & & & & & & & & & \\
\hline
\text{dividend} & 9.24 & & & & & & & & \\
\hline
\text{divisor} & 7 & & & & & & & & \\
\hline
\end{array}
\]  
\[
\begin{array}{c|c|c|c|c|c|c|c|c}
& & & & & & & & & & \\
\hline
\text{dividend} & 9.24 & & & & & & & & \\
\hline
\text{divisor} & 7 & & & & & & & & \\
\hline
\text{quotient} & 1.32 & & & & & & & & \\
\hline
\end{array}
\]  | **Find the quotient of each expression.** *(Show your work below)* |
| 3) 16 \(\div\) 2.5 |
| 4) 6.4 \(\div\) 3.14 |

| **Cubing a number**  
*Cube Numbers*  
1 \(\times\) 1 \(\times\) 1 = 1\(^3\) = 1  
2 \(\times\) 2 \(\times\) 2 = 2\(^3\) = 8  
3 \(\times\) 3 \(\times\) 3 = 3\(^3\) = 27  
4 \(\times\) 4 \(\times\) 4 = 4\(^3\) = 64  
5 \(\times\) 5 \(\times\) 5 = 5\(^3\) = 125  | **Find the cube of each expression.** |
| 5) 6\(^3\) = 6 \(\cdot\) 6 \(\cdot\) 6 = ____ |
| 6) 10\(^3\) = ______ = ____ |
| 7) 12\(^3\) = ______ = ____ |
### Finding the Volume of a Sphere

**Day 2**

**Guided Notes**

**Re-Write Formula Here:**

\[ V = \frac{4}{3} \pi r^3 \]

1. Label
2. (Diameter or Radius)
3. Substitute
4. Solve *(Order of Operations)*

\[ V = \frac{4}{3}(3.14)(3^3) \]
\[ V = \frac{4}{3}(3.14)(3 \cdot 3 \cdot 3) \]
\[ V = \frac{4}{3}(3.14)(27) \]
\[ V = \frac{4}{3}(84.78) \]
\[ V = \frac{4}{3} \cdot \frac{84.78}{1} = \frac{339.14}{3} = 113.04 \]
\[ V = 113.04 \text{ ft}^3 \]

**Find the volume of the sphere.**

1) \( r = 3 \text{ ft} \)

*Remember when multiplying fractions we multiply straight across*

**Find the volume of the sphere.**

2) \( d = 12 \text{ cm} \)

*Remember that the radius is half of the diameter*

*Remember when multiplying fractions we multiply straight across*
### Find the volume of the sphere.

<p>| | |</p>
<table>
<thead>
<tr>
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<th></th>
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</thead>
<tbody>
<tr>
<td>3)</td>
<td>r = 7 cm</td>
</tr>
<tr>
<td></td>
<td>*Remember when multiplying fractions we multiply straight across</td>
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</tbody>
</table>

### Find the volume of the sphere.

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<tbody>
<tr>
<td>4)</td>
<td>r = 8 in</td>
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</tbody>
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### Re-Write Formula Here:

1. **Label**
2. (Diameter or Radius)
3. Substitute
4. Solve *(Order of Operations)*
Day 3

Find the Volume of each figure below. Round to the nearest tenth.

Volume of a Cylinder: \( V = \pi r^2 h \)

1. \( \text{7 cm} \)
   \( \text{20 cm} \)

2. \( \text{8 ft} \)
   \( \text{9 ft} \)

Volume of a Sphere: \( V = \frac{4}{3} \pi r^3 \)

3. \( \text{50 cm} \)

4. \( \text{9 in.} \)

Volume of a Cone: \( V = \frac{1}{3} \pi r^2 h \)

5. \( \text{24 in.} \)
   \( \text{16 in.} \)

6. \( \text{300 mm} \)