Conversion Factors (Changing Units)

Use Conversion Factors to change units:

1 T. = 3 t.  \[ \quad \text{equal quantities.} \]

When dividing 2 equal quantities, the quotient is 1  \[ \quad \frac{1 \text{Tbs}}{3 \text{t}} = 1 \quad \text{OR} \quad \frac{3 \text{t}}{1 \text{Tbs}} = 1 \]

**EXAMPLES:**

1. **Change 9 Tbs to t.**

   \[
   9 \text{Tbs} \times \frac{3 \text{t}}{1 \text{Tbs}} = \left( \frac{9 \text{Tbs}}{1 \text{Tbs}} \right) \left( \frac{3 \text{t}}{1 \text{Tbs}} \right) = 27 \text{t}
   \]

2. **Change 2 oz. to t.**

   \[
   \text{STEP 1:} \quad 2 \text{ oz} \times \frac{30 \text{mL}}{1 \text{oz}} = 60 \text{ mL}
   \]

   \[
   \text{STEP 2:} \quad 60 \text{ mL} \times \frac{1 \text{t}}{5 \text{mL}} = 60 \text{ mL} \times \frac{1 \text{t}}{5 \text{mL}} = \frac{60 \times 1 \text{t}}{5} = 12 \text{ t}
   \]

Pick the conversion factor that works....

<table>
<thead>
<tr>
<th>Imperial measurement (approximate)</th>
<th>Metric (SI) measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 teaspoon (t)</td>
<td>5 mL</td>
</tr>
<tr>
<td>1 tablespoon (Tbs)</td>
<td>15 mL</td>
</tr>
<tr>
<td>1 cup (c)</td>
<td>240 mL</td>
</tr>
<tr>
<td>1 quart (qt)</td>
<td>1 litre</td>
</tr>
<tr>
<td>1 fluid ounce (oz)</td>
<td>30 mL</td>
</tr>
<tr>
<td>2.2 pounds (lb)</td>
<td>1 kg</td>
</tr>
</tbody>
</table>
Ask yourself: Does the answer make sense??

Use conversion factors to change the units as indicated: (Use appropriate units in answer.)

1. Change 15 mL to teaspoons.
2. Change 2 Tbs to teaspoons.
3. Change 2.5 cups to millilitres.
4. Change 3 oz. to mL.
5. Change 45 mL to tablespoons.
6. Change 24 tsp. to oz.
7. Change 5 oz. to mL.
8. Change 4 Tbs to oz.
9. Change 3 oz to Tbs.
10. Change 29 lb to kg.
11. Change 48 kg to pounds.

ANSWERS:
1. 3 t
2. 6 t
3. 600 mL
4. 90 mL
5. 3 Tbs
6. 4 oz.
7. 150 mL.
8. 2 oz.
9. 6 Tbs.
10. 13.2 kg
11. 106 lb