# Solving Proportions in Real-Life Situations

**Solving Problems using Proportional Reasoning**

<table>
<thead>
<tr>
<th>Proportion with Units</th>
<th>Work + Solution</th>
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1. Sam raked 3 bags of leaves in 16 minutes. If he continues to work at the same rate, about how long will it take him to rake 5 bags?

   \[
   \frac{3 \text{ bags}}{16 \text{ min}} = \frac{5 \text{ bags}}{x \text{ min}}
   \]

2. Amy earned $25 after babysitting for 3 hours. If she always charges the same rate, how much will she make after working for 7 hours?

   \[
   \frac{25}{3 \text{ hours}} = \frac{x}{7 \text{ hours}}
   \]

3. A 2-month membership to the gym costs $125. Jim would like to be a member for 8 months. What is the total amount he will pay for 8 months?

   \[
   \frac{2 \text{ months}}{125 \text{ dollars}} = \frac{8 \text{ months}}{x \text{ dollars}}
   \]

4. Bobby drove 110 miles, and his car used up 5 gallons of gas. How many miles can he drive with 16 gallons of gas?

   \[
   \frac{110 \text{ miles}}{5 \text{ gallons}} = \frac{x \text{ miles}}{16 \text{ gallons}}
   \]

5. Mary ran 2 miles in about 23 minutes. If she continued at the same pace, how long will it take her to run 10 miles?

   \[
   \frac{2 \text{ miles}}{23 \text{ minutes}} = \frac{x \text{ miles}}{10 \text{ minutes}}
   \]
For each problem, set up a proportion. Include the units for each ratio. Then solve for the missing value and label your answer with appropriate units. Round answers to the nearest tenth.

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\frac{3 \text{ bags}}{16 \text{ minutes}} = \frac{5 \text{ bags}}{x \text{ minutes}}
\] | |
| 2. Amy earned $25 after babysitting for 3 hours. If she always charges the same rate, how much will she make after working for 7 hours? | \[
\frac{25 \text{ dollars}}{3 \text{ hours}} = \frac{y \text{ dollars}}{7 \text{ hours}}
\] | |
| 3. A 2-month membership to the gym costs $125. Jim would like to be a member for 8 months. What is the total amount he will pay for 8 months? | \[
\frac{125 \text{ dollars}}{2 \text{ months}} = \frac{z \text{ dollars}}{8 \text{ months}}
\] | |
| 4. Bobby drove 110 miles, and his car used up 5 gallons of gas. How many miles can he drive with 16 gallons of gas? | \[
\frac{110 \text{ miles}}{5 \text{ gallons}} = \frac{w \text{ miles}}{16 \text{ gallons}}
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For each problem, set up a proportion. Include the units for each ratio. Then solve for the missing value and label your answer with appropriate units. Round answers to the nearest tenth.

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| 1. Sam raked 3 bags of leaves in 16 minutes. If he continues to work at the same rate, about how long will it take him to rake 5 bags? | \[
\frac{3 \text{ bags}}{16 \text{ min}} = \frac{5 \text{ bags}}{x \text{ min}}
\] | \[
3x = 5 \cdot 16 \\
x = 26.7 \\
x = 26.7 \text{ min}
\] |
| 2. Amy earned $25 after babysitting for 3 hours. If she always charges the same rate, how much will she make after working for 7 hours? | \[
\frac{25}{3} = \frac{x}{7}
\] | $58.33 |
| 3. A 2-month membership to the gym costs $125. Jim would like to be a member for 8 months. What is the total amount he will pay for 8 months? | \[
\frac{2}{125} = \frac{8}{x}
\] | $500 |
| 4. Bobby drove 110 miles, and his car used up 5 gallons of gas. How many miles can he drive with 16 gallons of gas? | \[
\frac{110}{5} = \frac{x}{16}
\] | 352 miles |
| 5. Mary ran 2 miles in about 23 minutes. If she continued at the same pace, how long will it take her to run 10 miles? | \[
\frac{2}{23} = \frac{10}{x}
\] | 115 min |
Thank you for downloading this worksheet!

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