Follow the directions given for each problem. Be sure to show your work!

1. Use Figure 1 to answer the questions.

<table>
<thead>
<tr>
<th>Num. of Hrs Worked</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>$60</td>
</tr>
<tr>
<td>4</td>
<td>$80</td>
</tr>
<tr>
<td>5</td>
<td>$100</td>
</tr>
<tr>
<td>6</td>
<td>$120</td>
</tr>
</tbody>
</table>

(a) Define variables using complete sentences.

\[ n \text{ represents number of hours worked and } m \text{ represents the salary amount in dollars.} \]

(b) Write a formula that describes the relationship in the table.

\[ m = 20n \]

(c) Use the formula to calculate the salary after working 8 hours and 45 minutes. Write your answer in a complete sentence and include units.

The salary is $175.

(d) How many hours need to be worked to earn a salary of $185? Write your answer in a complete sentence and include units.

A person needs to work 9.25 hours or 9 hours and 15 minutes.
2. Use the given formula to perform the indicated operation with the two fractions.

(a) \( \left( \frac{a}{b} \right) \left( \frac{c}{d} \right) = \frac{ac}{bd} \); \( \left( \frac{3}{7} \right) \left( \frac{2}{5} \right) \)
\[ \frac{6}{35} \]

(b) \( \frac{a}{b} \div \frac{c}{d} = \frac{ad}{bc} \); \( \frac{2}{3} \div \frac{7}{5} \)
\[ \frac{10}{21} \]

(c) \( \frac{a}{b} - \frac{c}{b} = \frac{a-c}{b} \); \( \frac{9}{17} - \frac{5}{17} \)
\[ \frac{4}{17} \]