Daily Dilemma #14: Answer Key

1. #1 shows the cake divided into an equal number of pieces. Each girl will get 4 pieces of cake.

2. \[ \$30.00 \text{ / day } \times 7 \text{ days} = \$210.00 \]
\[ \$0.22 \text{ / km } \times 230 \text{ km} = \$50.60 \text{ mileage} \]
\[ \text{total cost} = \$210.00 + 50.60 = \$260.60 \]

3. Profit = \( 38.10 - (12.00 + 6.33 + 2.46 + 4.50) \) = 12.81

Each boy gets \( 12.81 \div 3 = \$4.27 \)

4.

<table>
<thead>
<tr>
<th>Time</th>
<th>8:00</th>
<th>8:01</th>
<th>8:02</th>
<th>8:03</th>
<th>8:04</th>
<th>8:05</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of boys</td>
<td>1</td>
<td>5</td>
<td>9</td>
<td>13</td>
<td>17</td>
<td>21</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>8:06</th>
<th>8:07</th>
<th>8:08</th>
<th>8:09</th>
<th>8:10</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of boys</td>
<td>25</td>
<td>29</td>
<td>33</td>
<td>37</td>
<td>41</td>
</tr>
</tbody>
</table>

41 boy scouts left for the fair at 8:10.

Extra Credit Rule: number of boys = 4 (number of minutes after 8) + 1

5.

Extra Credit area = \( 13 \times 15 = 195 \) square feet of carpet

The border material requires the perimeter:
\[ 13 + 15 + 13 + 15 = 56 \text{ feet} \]

*The magic numbers are the sum of the correct answers.*