Family Reunion Time!

You are going on a trip to attend a family reunion in St. Louis, Missouri. You and a family member will stay there for five days and four nights. You have been saving money for this trip and have $1,700 to spend. You will travel by car. You have to figure out the cost for gas, hotels, food, and something for fun. Your entire expenses cannot exceed $1,700.

1. Number of Miles
   Use MapQuest to calculate the number of miles from your starting point to St. Louis, Missouri. To do this, go to the website www.mapquest.com.
   Click on “Get Directions.”
   Type the name of your town/city in “Start.”
   Type this in “End”: St. Louis, Missouri.
   Click “Get Directions.”
   a. The one-way trip from my town/city to St. Louis is \(890\) miles.
   b. The round trip from my town to St. Louis and back is \(1,780\) miles.

2. Gallons of Gas
   Calculate how much gas you need. Assume that your car will get 25 miles per gallon (mpg). If you will use another car and you know how many mpg it gets, use that number instead of 25.
   a. The car I will use gets \(25\) miles per gallon.
   b. Divide the total number of miles round trip by the mpg for your car.
      Round your answer to the nearest whole number.
      I will need \(71\) gallons of gas to drive to and from St. Louis.
      Example: \(\frac{71 \text{ gallons}}{25 \text{ miles round trip}}\)

3. Cost of the Gas
   Calculate the cost of the gas. Use the AAA Fuel Cost Calculator.
   Go to this website: http://fuelcostcalculator.aaa.com.
   Look at the U.S. map. Find the average cost per gallon in each region you will drive through.
   Pick the highest cost to use in your calculations. Multiply this cost by the number of gallons of gas you need.
   Round your answer to the nearest dollar. The gas for my trip will cost $\(278\).
   Example: \(3.91 \text{ per gallon} \times 71 \text{ gallons} = 277.61 = 278\)

4. Number of Nights You Need a Hotel
   You will share a hotel room for four nights in St. Louis. You might also need to stay in a hotel on your way to and from St. Louis. You do not want to drive more than 480 miles per day.
   If St. Louis is less than 480 miles from your town, you will not need a hotel during the drive.
   If it is more than 480 miles, divide the number of miles to St. Louis by 480.
   Example: \(1 \text{ night in a motel for the trip each way} \)
   I will need a hotel room for \(6\) nights. (Include the 4 nights in St. Louis plus the number of nights you will need a hotel going there and coming home—in other words, round trip.)
5. **Cost of Hotels:**
   Decide how much you want to pay for a hotel. Check one of these:
   - $130 per night: Top-Notch Hotel (has a pool, a fitness room, a restaurant, and in-room movies)
   - $70 per night: Good Hotel (has a pool, in-room movies and a restaurant nearby)
   - $45 per night: Average Hotel (has a pool)
   Multiply the cost per night by the number of nights you need. My total hotel cost will be $_________.
   
   **Example:** $ 70 cost of hotel per night
   
   \[ \times 6 \text{ nights} \]
   
   $420 cost of hotels for the trip

6. **Cost of Food:**
   Decide how much you want to spend per day for food. Check one of these:
   - $40 per day (fast food for two people)
   - $100 per day (a good breakfast, fast food lunch, and a reasonably priced dinner for two people)
   Multiply the cost per day by the total trip days. My total food cost will be $_________.
   
   **Example:** $100 cost of food per day
   
   \[ \times 6 \text{ days} \]
   
   $600 cost of food for the trip

7. **Just for Fun**
   Do you want to do something special in St. Louis while you’re there? You could take a dinner boat on the Mississippi River for $42 per person. Or you could go to a St. Louis Cardinals baseball game for $30 per person. Put the cost below if want to do one or both of these things:
   
   **Cost for you:** $42 for dinner boat
   
   **Cost for the person you are with:** $42 for dinner boat
   
   **Total cost:** $84 for dinner boat

8. **Total Cost of the Trip**
   
<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas</td>
<td>$278</td>
</tr>
<tr>
<td>Hotels</td>
<td>$420</td>
</tr>
<tr>
<td>Food</td>
<td>$600</td>
</tr>
<tr>
<td>Just for fun</td>
<td>$84</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$1,382</td>
</tr>
</tbody>
</table>

   How did you do? Did you stay within your budget?