Directions: Please answer the following questions and make sure your answer are legible. If you don’t show work and/or I can’t follow it, I won’t give partial credit. You may use a calculator (not the calculator function on other technology) and the Formula Sheet that I provide you, nothing else. Good Luck.

1. Parker took out a loan where quarterly payments will be made to repay a $10,000 at $8\frac{1}{4}\%$ for 10 years. The quarterly payments are $369.58.

(a) (7 points) Fill in the first 2 rows of the Amortization Table for Parker’s Loan. Notice this is first 2 rows of a much longer table, the balance will not reach 0 at the end of row 2.

<table>
<thead>
<tr>
<th>Payment Number</th>
<th>Payment Amount</th>
<th>Interest Amount</th>
<th>Principal Amount</th>
<th>Remaining Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>369.58</td>
<td>@206.25</td>
<td>@163.33</td>
<td>@9836.67</td>
</tr>
<tr>
<td>2</td>
<td>369.58</td>
<td>@202.87</td>
<td>@166.70</td>
<td>@9669.97</td>
</tr>
</tbody>
</table>

(b) (1 point) How much money will Parker spend repaying this loan?

\[
\frac{369.58 \times 40}{10 \times 4} = \frac{14783.20}{40} = 369.58 \text{ quarterly payments} \\
\]

\[
10,000 \times .0825/4 = 163.33 \\
369.58 - 206.25 = 163.33 \\
9836.67 \times (0.0825/4) = 202.88 \quad \text{good, I expect this to be less than in prev. row} \\
9836.67 - 203.87 = 166.70 \quad \text{good, should be slightly more than in prev row} \\
9836.67 - 166.70 =
\]

There is a Question on the Back!
2. Sam and Logan are planning on buying a house. They have saved up $25,000 for a down payment, and they qualify for 3.92% interest on a 30 year mortgage. They have determined that they can afford monthly mortgage payments of $735.

(a) (6 points) How much money can Sam and Logan afford to borrow?

(b) (1 point) What is the most amount of money that Sam and Logan can afford to spend on a house?

\[
pv = \frac{735 \times (211.499332)}{155,452.01} \text{ or } \frac{735 \times (211.499332)}{155,452}
\]

\[
= 211.499332
\]

(a) Sam & Logan can borrow (up to) $155,452.01

(b) they can spend up to $155,452.01 + $25,000 = $180,452.01 on a house

\[
\text{Interest} = \text{Total Deposits} - pv
\]

\[
= (735) \times (360) - 155,452.01 \text{ on interest}
\]

\[
= 264,600 - 155,452.01 = 109,147.99 \text{ or } 109,148
\]

**Bonus:** (1 pt) How much will Sam and Logan spend on interest with their Mortgage? (assuming they borrow the maximum amount they can afford).