1) The US Tax code is currently as follows:

<table>
<thead>
<tr>
<th>Taxable Income</th>
<th>Tax Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0 - $7,150</td>
<td>10%</td>
</tr>
<tr>
<td>$7,151 - $29,050</td>
<td>15%</td>
</tr>
<tr>
<td>$29,051 - $70,350</td>
<td>25%</td>
</tr>
<tr>
<td>$70,351 - $146,750</td>
<td>28%</td>
</tr>
<tr>
<td>$146,751 - $319,100</td>
<td>33%</td>
</tr>
<tr>
<td>$319,101 +</td>
<td>35%</td>
</tr>
</tbody>
</table>

a) Median income in the US is around $50,000 per year. If the standard deduction, exemption is equal to $8,500, calculate the tax bill for the median household.

b) What is the average tax rate for the median household? What is the marginal rate?

c) Steven Forbes proposed a “flat tax” plan when he ran for president: A $36,000 deduction and a flat tax rate of 17%. How would the change in the tax code affect your answer to (a) and (b)?

To calculate the tax bill, first calculate taxable income: $50,000 - $8,500 = $41,500.

Now, add up the tax bill:

\[ \text{Tax Bill} = 7,150 \times 0.10 + (29,050 - 7,150) \times 0.15 + (41,500 - 29,051) \times 0.25 = 7,112 \]

This household’s marginal tax rate is 25% (25% of the next dollar earned would be paid in taxes), but has an average rate of \((7,112/50,000) \times 100 = 14\%\)

Under the new system, the tax bill would be:

\[ \text{Tax Bill} = 50,000 - 36,000 = 14,000 \text{ Taxable income} \]

\[ 14,000 \times 0.17 = 2,380 \]

Marginal Rate = 17%

Average Rate = 2,380/50,000 = 4.7%