How much amusement floor space must destination 2 add to achieve a total of 250 trips?

Determine the distribution of trips among possible destinations:

<table>
<thead>
<tr>
<th>Destination</th>
<th>Population</th>
<th>Distance From Origin (miles)</th>
<th>(thousands of ft²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.5</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>0.8</td>
<td>6.9</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>0.5</td>
<td>3.3</td>
<td>7.5</td>
</tr>
</tbody>
</table>

Possible destinations have the following characteristics:

- 0.2(Population at destination in thousands)
- 0.2(Distance from origin to destination in miles)
- 0.2(Cost of amusement floor space in thousands)
- 0.09(Square feet of amusement floor space in thousands)

Number of auto-mode social/recreational trips per household.

Model:

Problems: 8.13 and 8.16
\[ \frac{\sigma_{\text{mat}}}{\sigma_{\text{c}}} = 5.75 \]

\[ \sigma_n = 0.67 \quad \sigma_{\text{mat}} = 1.95 \]

\[ \sigma_n = 0.4 \quad \sigma_{\text{mat}} = 1.49 \]

\[ \sigma_n = 0.9 \quad \sigma_{\text{mat}} = 2.46 \]

\[ \frac{\sigma_{\text{mat}}}{\sigma_{\text{c}}} = 1.75 \]

\[ = 0.2 \text{ (cub) } + 0.09 \text{ (space) } \]

\[ \frac{\sigma_{\text{mat}}}{\sigma_{\text{c}}} = 1.75 \]

\[ \frac{\sigma_{\text{mat}}}{\sigma_{\text{c}}} = 0.09 \]

\[ B_{\text{mat}} = 0.2 \quad B_{\text{cub}} = -0.24 \]

\[ B_{\text{mat}} = 0.2 \quad B_{\text{space}} = -0.24 \]
\[ P_{R2} = \frac{760 \text{ ft}}{200} = 0.3 \text{ ft/s} \]

\[ P_d = \begin{cases} 0.1 \text{ ft/s} & < 11 \text{ ft} \\ 0.128 \times 7700 = 90 & \geq 11 \text{ ft} \end{cases} \]

\[ P_{A2} = 0.21 \times 7700 = 148 \]

\[ P_{A4} = \frac{1.66 \times 0.494 \times 7700}{5.45} = \frac{114}{6} = \frac{2}{3} \]
\[
\text{Volume} = \frac{8.128 \text{ ft}^3}{10}
\]

\[
= 0.8128 \text{ ft}^3
\]

\[
\text{Total Space} = 1.631 - 0.2(6.0 - 0.24(5.0) + 0.09 \text{ space})
\]

\[
= 1.631 - 0.2(6.0 - 0.24(5.0) + 0.09 \text{ space})
\]