Learning Target: I can solve a multi-step equation.

Example 1

Solve \(2.5x - 13 = 2\)

\[
\begin{align*}
2.5x - 13 &= 2 \\
2.5x &= 15 \\
x &= 6
\end{align*}
\]

Monitoring Progress 1-3

1. \(-n + 3 = 9\)
2. \(-3 - \frac{1}{2}c - 11\)
3. \(2x - 10x + 12 = -6\)

Example 4

Use the table to find the number of miles \(x\) you need to bike on Friday so that the mean number of miles biked per day is 5.

<table>
<thead>
<tr>
<th>Day</th>
<th>Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>3.5</td>
</tr>
<tr>
<td>Tuesday</td>
<td>5.5</td>
</tr>
<tr>
<td>Wednesday</td>
<td>0</td>
</tr>
<tr>
<td>Thursday</td>
<td>5</td>
</tr>
<tr>
<td>Friday</td>
<td>4</td>
</tr>
</tbody>
</table>

\[
3.5 + 5.5 + 0 + 5 + x = 5 \\
\frac{14 + x}{5} = 5.5 \\
14 + x = 27.5 \\
x = 13\text{ miles}
\]

Example 5

Your school's drama club charges $4 per person for admission to a play. The club borrowed $400 to pay for costumes and props. After paying back the loan, the club has a profit of $100. How many people attended the play?

\[
4x - 400 = 100 \\
4x = 500 \\
x = 125\text{ people}
\]
11. You have 96 feet of fencing to enclose a rectangular pen for your dog. To provide sufficient running space for your dog to exercise, the pen should be three times as long as it is wide. Find the dimensions of the pen.

\[
\begin{align*}
3w & = 36 \\
12 & \times 36 \\
3w + w + 3w + w & = 96 \\
8w & = 96 \\
w & = 12
\end{align*}
\]