General Equations-Part I

**Objective A** To solve an equation of the form \( ax + b = c \)

In solving an equation of the form \( ax + b = c \), the goal is to rewrite the equation in the form \( \text{variable} = \text{constant} \). This requires the application of both the Addition and the Multiplication Properties of Equations.

Solve: \( \frac{3}{4} x - 2 = -11 \)

The goal is to write the equation in the form \( \text{variable} = \text{constant} \).

\[
\frac{3}{4} x - 2 = -11 
\]

\[
\frac{3}{4} x - 2 + 2 = -11 + 2 \quad \text{Add 2 each side of the equation.}
\]

\[
\frac{3}{4} x = -9 \quad \text{Simplify.}
\]

\[
\frac{4}{3} \cdot \frac{3}{4} x = \frac{4}{3} (-9) \quad \text{Multiply each side of the equation by } \frac{4}{3}.
\]

\[
x = -12 \quad \text{The equation is of the form } \text{variable} = \text{constant}.
\]

The solution is \(-12\).