6.1 SOLVING EQUATION BY USING INVERSE OPERATIONS

**1 step equations**

Inverse operations "undo" each other results.

- Addition and subtraction are inverse operations.

**WRITING**

(a) A number plus 5 is 20

\[ x + 5 = 20 \]

**x** represents the number.

\[ x + 5 = 20 \]
\[-5 \quad -5 \]

**X = 15**

1. Do the opposite operation.
2. Whatever you do to 1 side of the equal sign, you must do to the other side!!!

(b) Four times a number is -32

\[ 4x = -32 \]

\[ x = -8 \]
2 step equations

Solve then verify each equation

(a) \(3x + 4 = -5\)

\[
\begin{align*}
3x & = -9 \\
x & = -3
\end{align*}
\]

Verify substitute \(-3\) for \(x\) in the original equation:

\[
\begin{align*}
3(-3) + 4 & = -5 \\
-9 + 4 & = -5 \\
-5 & = -5
\end{align*}
\]

(b) \(2(-2 + w) = 18\)

\[
\begin{align*}
-4 + 2w & = 18 \\
2w & = 22 \\
w & = 11
\end{align*}
\]

(c) \(\frac{x}{4} + 3 = 7\)

\[
\begin{align*}
x & = 42 \\
y & = 16 \ 8
\end{align*}
\]

pg 272 # 8-16, 18, 20, 24