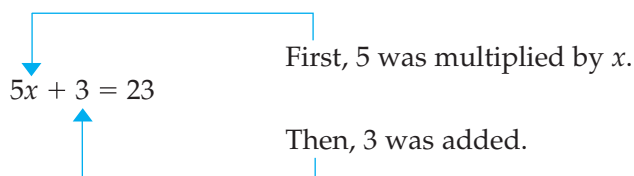


Solving Multi-Step Equations

When solving some equations, you must perform more than one operation on both sides. First, determine what operations have been done to the variable. Then undo these operations in the reverse order.

Examples ① Solve $5x + 3 = 23$.



To solve, undo the operations in reverse order.

$$5x + 3 - 3 = 23 - 3 \quad \text{Because 3 was added, subtract 3 from each side.}$$

$$5x = 20$$

$$\frac{5x}{5} = \frac{20}{5} \quad \text{Because 5 was multiplied, divide each side by 5.}$$

$$x = 4$$

② Solve $10 = 7 - \frac{r}{2}$.

$$10 - 7 = 7 - \frac{r}{2} - 7 \quad \text{Because 7 was added, subtract 7 from each side.}$$

$$3 = -\frac{r}{2}$$

$$-2(3) = -2\left(-\frac{r}{2}\right) \quad \text{Because } -\frac{r}{2} \text{ means } r \text{ divided by } -2, \text{ multiply each side by } -2.$$

$$-6 = r$$