

Two-Step Equations

When you solve two-step equations, first undo the addition or subtraction step. Then undo the multiplication or division step.

Solve: $5w - 13 = 42$

To undo the subtraction,
add 13 to both sides of the equation.

$$\begin{array}{r} 5w - 13 = 42 \\ + 13 \quad + 13 \\ \hline 5w = 55 \\ \hline 5 \quad \quad 5 \end{array}$$

To undo the multiplication,
divide both sides the equation by 5.

$$w = 11$$

Check your answer by substituting 11 for w in the original equation.

$$\begin{array}{r} 5w - 13 = 42 \\ 5 \times 11 - 13 = 42 \\ 55 - 13 = 42 \\ 42 = 42 \leftarrow \text{It checks.} \end{array}$$

Complete. Solve.

1. $4d + 10 = 22$

$$\begin{array}{r} \square - \square - \square \\ \square = \square \\ 4 \quad \quad 4 \end{array}$$

$d = \underline{\hspace{2cm}}$

2. $\frac{s}{2} + 3.2 = 8.6$

$$\begin{array}{r} - \square - \square \\ \square = \square \\ \times \square \quad \times \square \end{array}$$

$s = \underline{\hspace{2cm}}$

3. $\frac{t}{6} - 4 = 1$

$$\begin{array}{r} \square \quad \square \\ \frac{t}{6} = \square \\ \square \quad \square \end{array}$$

$t = \underline{\hspace{2cm}}$

4. $7r - 4.9 = 56$

$r = \underline{\hspace{2cm}}$

5. $3.4w + 12.8 = 114.8$

$w = \underline{\hspace{2cm}}$

6. $\frac{b}{9} + 14 = 21$

$b = \underline{\hspace{2cm}}$

7. $\frac{1}{3}z - \frac{1}{8} = \frac{1}{8}$

$z = \underline{\hspace{2cm}}$

8. $0.7c + 2.4 = 5.9$

$c = \underline{\hspace{2cm}}$

9. $\frac{a}{4} - 15 = 65$

$a = \underline{\hspace{2cm}}$

10. $29 = 12x - 7$

$x = \underline{\hspace{2cm}}$

11. $15 = \frac{n}{5} - 5$

$n = \underline{\hspace{2cm}}$

12. $31.4 = 2.7m + 1.7$

$m = \underline{\hspace{2cm}}$