

2-5

Practice

Form G

Literal Equations and Formulas

Solve each equation for m .

1. $m + 3n = 7$

$$\begin{array}{r} -3n \quad -3n \\ \hline m = 7 - 3n \end{array}$$

3. $-5n = 4m + 8$

$$\begin{array}{r} -8 \quad -8 \\ \hline -5n - 8 = 4m \\ \hline m = \frac{-5n - 8}{4} \quad \text{or} \quad m = -\frac{5}{4}n - 2 \end{array}$$

5. $8n = -3m + 1$

$$\begin{array}{r} -1 \quad +1 \\ \hline 8n - 1 = -3m \\ \hline m = \frac{8n - 1}{-3} \end{array}$$

Solve each equation for the given variable.

9. $3ab - 2bc = 12$ solve for c

$$\begin{array}{r} -3ab \quad -3ab \\ \hline -2bc = 12 - 3ab \\ \hline c = \frac{12 - 3ab}{-2b} \end{array}$$

11. $F = \frac{9}{5}C + 32$ solve for C

$$\begin{array}{r} -32 \quad -32 \\ \hline (\frac{5}{9})F - 32 = \frac{9}{5}C \quad (\frac{5}{9}) \\ \hline \frac{5}{9}(F - 32) = C \end{array}$$

2. $3m - 9n = 24$

$$\begin{array}{r} +9n \quad +9n \\ \hline 3m = 24 + 9n \\ \hline m = \frac{24 + 9n}{3} \quad \text{or} \quad m = 8 + 3n \end{array}$$

4. $7m = -6n - 5$

$$\begin{array}{r} -6n - 5 \\ \hline m = \frac{-6n - 5}{7} \quad \text{or} \quad m = -\frac{6}{7}n - \frac{5}{7} \end{array}$$

6. $4n - 6m = -2$

$$\begin{array}{r} -4n \quad -4n \\ \hline -6m = -2 - 4n \\ \hline m = \frac{-2 - 4n}{-6} \quad \text{or} \quad m = \frac{1 + 2n}{3} \end{array}$$

8. $\frac{c}{d} + 2 = \frac{f}{g}$; solve for c

$$\begin{array}{r} -2 \quad -2 \\ \hline (\frac{c}{d}) = \frac{f}{g} - 2 \quad (d) \\ \hline c = (\frac{f}{g} - 2)d \end{array}$$

10. $z = \left(\frac{x+y}{3}\right)w$; solve for y

$$\begin{array}{r} (3) \frac{z}{w} = \frac{x+y}{3} \quad (3) \\ \hline 3\frac{z}{w} = x + y \\ \hline -x \quad -x \\ \hline y = 3\frac{z}{w} - x \end{array}$$

12. $\frac{9}{5}C = \frac{5}{9}(F - 32)$ solve for F

$$\begin{array}{r} \frac{9}{5}C = F - 32 \\ \hline +32 \quad +32 \\ \hline \frac{9}{5}C + 32 = F \end{array}$$