

Practice 3.2

Solve each equation.

1) $2n - 6 = -28$

$$\begin{array}{r} +6 \quad +6 \\ \hline 2n = -22 \\ \frac{\quad}{2} \quad \frac{\quad}{2} \\ \hline n = -11 \end{array}$$

3) $3 = -4p + 3$

$$\begin{array}{r} -3 \quad -3 \\ \hline 0 = -4p \\ \frac{\quad}{-4} \quad \frac{\quad}{-4} \\ \hline 0 = p \end{array}$$

3) $5r \frac{x+3}{3} = -3 \cdot 3$

$$\begin{array}{r} x+3 \quad -9 \\ -3 \quad -3 \\ \hline x+3 = -9 \\ \frac{\quad}{-3} \quad \frac{\quad}{-3} \\ \hline x = -12 \end{array}$$

7) $3 = 1 + \frac{r}{3}$

$$\begin{array}{r} -1 \quad -1 \\ \hline 3 \cdot 2 = \frac{r}{3} \cdot 3 \\ \hline 6 = r \end{array}$$

4) $\frac{n+2}{4} = 1 \cdot 4$

$$\begin{array}{r} n+2 = 4 \\ -2 \quad -2 \\ \hline n = 2 \end{array}$$

2) $6x + 1 = -11$

$$\begin{array}{r} -1 \quad -1 \\ \hline 6x = -12 \\ \frac{\quad}{6} \quad \frac{\quad}{6} \\ \hline x = -2 \end{array}$$

4) $\frac{a}{3} - 7 = -10$

$$\begin{array}{r} +7 \quad +7 \\ \hline 3 \cdot \frac{a}{3} = -3 \cdot 3 \\ \hline a = -9 \end{array}$$

6) $-2 = -1 + \frac{k}{14}$

$$\begin{array}{r} +1 \quad +1 \\ \hline 14 \cdot -1 = \frac{k}{14} \cdot 14 \\ \hline -14 = k \end{array}$$

8) $-1 = \frac{x}{2} + 2$

$$\begin{array}{r} -2 \quad -2 \\ \hline 2 \cdot -3 = \frac{x}{2} \cdot 2 \\ \hline -6 = x \end{array}$$

10) $-1 - 2v = 11$

$$\begin{array}{r} +1 \quad +1 \\ \hline -2v = 12 \\ \frac{\quad}{-2} \quad \frac{\quad}{-2} \\ \hline v = -6 \end{array}$$

$$4$$

$$11) 2 = \frac{3+a}{4} \cdot 4$$

$$8 = 3+a$$

$$\begin{array}{r} -3 \quad -3 \\ \hline 5 = a \end{array}$$

$$13) -1 = -x + 2$$

$$\begin{array}{r} -2 \quad -2 \\ \hline -3 = -x \\ \hline -1 \quad -1 \\ \hline 3 = x \end{array}$$

$$15) 7 = -5p + 4p$$

$$\begin{array}{r} 7 = -1p \\ \hline -1 \quad -1 \\ \hline -7 = p \end{array}$$

$$17) -6 = 2 + 5x - 6x \quad \text{CLT}$$

$$\begin{array}{r} -6 = 2 - 1x \\ -2 \quad -2 \\ \hline -8 = -1x \\ \hline -1 \quad -1 \\ \hline 8 = x \end{array}$$

$$19) -14.5 = -0.2 + 2.6x$$

$$\begin{array}{r} +0.2 \quad +0.2 \\ \hline -14.3 = 2.6x \\ \hline 2.6 \quad 2.6 \\ \hline -5.5 = x \end{array}$$

$$12) 3x + 2 = 5$$

$$\begin{array}{r} -2 \quad -2 \\ \hline 3x = 3 \\ \hline 3 \quad 3 \\ \hline x = 1 \end{array}$$

$$14) -6 = k - 2 - 5$$

$$\begin{array}{r} -6 = k - 7 \\ +7 \quad +7 \\ \hline 1 = k \end{array} \quad \text{COMBINE LIKE TERMS first!}$$

$$16) -7a - 4a = 11$$

$$\begin{array}{r} -11a = 11 \quad \text{CLT} \\ \hline -11 \quad -11 \\ \hline a = -1 \end{array}$$

$$18) 1 = 6p + 6 - p \quad \text{CLT}$$

$$\begin{array}{r} 1 = 5p + 6 \\ -6 \quad -6 \\ \hline -5 = 5p \\ \hline -1 = p \end{array}$$

$$20) 1.5x + 4.1 = -2.8$$

$$\begin{array}{r} -4.1 \quad -4.1 \\ \hline 1.5x = -6.9 \\ \hline 1.5 \quad 1.5 \\ \hline x = -4.6 \end{array}$$