

In the following exercises, solve each linear equation.

232. $15(y - 9) = -60$

$$\begin{array}{r} 15y - \cancel{135} = -60 \\ + \cancel{135} + 135 \end{array}$$

$$\frac{\cancel{15}y}{\cancel{15}} = \frac{75}{15}$$

$$y = 5$$

234. $-9(2n + 1) = 36$

$$-1(-18n - 9) = 36 \times (-1)$$

$$\begin{array}{r} 18n + \cancel{9} = -36 \\ - \cancel{9} -9 \end{array}$$

$$\frac{\cancel{18}n}{\cancel{18}} = \frac{-45}{18}$$

$$n = -\frac{5}{2}$$

236. $8(22 + 11r) = 0$

$$\begin{array}{r} \cancel{176} + 88r = 0 \\ -\cancel{176} -176 \end{array}$$

$$\frac{\cancel{88}r}{\cancel{88}} = \frac{-176}{88} \quad \cancel{88}^2$$

$$r = -2$$

238. $-(w - 12) = 30$

$$\begin{array}{r} -\cancel{w} + 12 = 30 \\ +\cancel{w} +w \end{array}$$

$$\begin{array}{r} 12 = \cancel{30} + w \\ -30 -\cancel{30} \end{array}$$

$$-18 = w$$

$$w = -18$$

233. $21(y - 5) = -42$

$$\begin{array}{r} 21y - \cancel{105} = -42 \\ + \cancel{105} + 105 \end{array}$$

$$\frac{\cancel{21}y}{\cancel{21}} = \frac{6^2}{\cancel{21}^7}$$

$$y = \frac{2}{7}$$

235. $-16(3n + 4) = 32$

$$\begin{array}{r} -\cancel{48}n - 64 = 32 \\ +\cancel{48}n + 48n \end{array}$$

$$\begin{array}{r} -64 = \cancel{32} + 48n \\ -\cancel{32} -\cancel{32} \end{array}$$

$$\frac{-96}{48} = \frac{\cancel{48}n}{\cancel{48}} \Rightarrow n = -2$$

237. $5(8 + 6p) = 0$

$$\begin{array}{r} \cancel{40} + 30p = 0 \\ -\cancel{40} -40 \end{array}$$

$$\frac{\cancel{30}p}{\cancel{30}} = \frac{-40}{30}$$

$$p = -\frac{4}{3}$$

239. $-(t - 19) = 28$

$$\begin{array}{r} -\cancel{t} + 19 = 28 \\ +\cancel{t} +t \end{array}$$

$$\begin{array}{r} 19 = \cancel{28} + t \\ -28 -\cancel{28} \end{array}$$

$$t = -9$$

$$240. 9(6a + 8) + 9 = 81$$

$$54a + 72 + 9 = 81$$

$$\begin{array}{r} 54a + \cancel{81} = \cancel{81} \\ \quad \quad \quad \cancel{-81} \quad \quad \quad \cancel{-81} \end{array}$$

$$\begin{array}{r} \cancel{54}a = 0 \\ \hline \cancel{54} \quad \quad \cancel{54} \end{array}$$

$$a = 0$$

$$241. 8(9b - 4) - 12 = 100$$

$$72b - 32 - 12 = 100$$

$$\begin{array}{r} 72b - \cancel{44} = 100 \\ \quad \quad \quad \cancel{+44} \quad \quad \quad \cancel{+44} \end{array}$$

$$\begin{array}{r} \cancel{72}b = 144 \\ \hline \cancel{72} \quad \quad \cancel{72} \end{array}$$

$$b = 2$$

$$242. 32 + 3(z + 4) = 41$$

$$32 + 3z + 12 = 41$$

$$\begin{array}{r} \cancel{44} + 3z = 41 \\ \quad \quad \quad \cancel{-44} \quad \quad \quad \cancel{-44} \end{array}$$

$$\begin{array}{r} \cancel{3}z = -3 \\ \hline \cancel{3} \quad \quad \cancel{3} \end{array}$$

$$z = -1$$

$$243. 21 + 2(m - 4) = 25$$

$$21 + 2m - 8 = 25$$

$$\begin{array}{r} 2m + \cancel{13} = 25 \\ \quad \quad \quad \cancel{-13} \quad \quad \quad \cancel{-13} \end{array}$$

$$\begin{array}{r} \cancel{2}m = 12 \\ \hline \cancel{2} \quad \quad \cancel{2} \end{array}$$

$$m = 6$$

$$244. 51 + 5(4 - q) = 56$$

$$245. -6 + 6(5 - k) = 15$$

$$246. 2(9s - 6) - 62 = 16$$

$$247. 8(6t - 5) - 35 = -27$$

$$48t - 40 - 35 = -27$$

$$48t - \cancel{40} = -27$$

$$ + \cancel{40} + 75$$

$$\frac{\cancel{48}t}{\cancel{48}} = \frac{48}{48}$$

$$t = 1$$

$$248. 3(10 - 2x) + 54 = 0$$

$$249. -2(11 - 7x) + 54 = 4$$

$$250. \frac{2}{3}(9c - 3) = 22$$

$$\frac{2}{3} \times 9c - \frac{2}{3} \times 3 = 22$$

$$\frac{18c}{3} - \frac{6}{3} = 22$$

$$6c - \cancel{2} = 22$$

$$ + \cancel{2} + 2$$

$$\frac{\cancel{6}c}{\cancel{6}} = \frac{24}{6} \Rightarrow c = 4$$

$$251. \frac{3}{5}(10x - 5) = 27$$

$$\frac{3}{5} \times 10x - \frac{3}{5} \times 5 = 27$$

$$\frac{30x}{5} - \frac{15}{5} = 27$$

$$6x - \cancel{3} = 27$$

$$ + \cancel{3} + 3$$

$$\frac{\cancel{6}x}{\cancel{6}} = \frac{30}{6} \Rightarrow x = 5$$