

Solutions to WS 12.2 - More Solving Two-Step Equations, #1-20 all

$$\begin{aligned} \textcircled{1} \quad 8 - 4d &= 12 \\ -8 \quad -8 \\ \hline -4d &= 4 \\ \frac{-4d}{-4} &= \frac{4}{-4} \\ \hline d &= -1 \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad -11 - 10f &= -41 \\ +11 \quad +11 \\ \hline -10f &= -30 \\ \frac{-10f}{-10} &= \frac{-30}{-10} \\ \hline f &= 3 \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad 5.3 &= -b + 1.8 \\ -1.8 \quad -1.8 \\ \hline 3.5 &= -b \\ \frac{3.5}{-1} &= \frac{-b}{-1} \\ \hline -3.5 &= b \Rightarrow b = -3.5 \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad 9 &= 7 - \frac{j}{4} \\ -7 \quad -7 \\ \hline 2 &= -\frac{j}{4} \quad \cdot(-4) \\ \hline -8 &= j \Rightarrow j = -8 \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad 12h - 2.5 &= -26.5 \\ +2.5 \quad +2.5 \\ \hline 12h &= -24 \\ \frac{12h}{12} &= \frac{-24}{12} \\ \hline h &= -2 \end{aligned}$$

$$\begin{aligned} \textcircled{6} \quad 1 - 4n &= 65 \\ -1 \quad -1 \\ \hline -4n &= 64 \\ \frac{-4n}{-4} &= \frac{64}{-4} \\ \hline n &= -16 \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad \frac{b}{4} - 3.2 &= 12.3 \\ +3.2 \quad +3.2 \\ \hline \frac{b}{4} &= 15.5 \quad \cdot(4) \\ \hline b &= 62 \end{aligned}$$

$$\begin{aligned} \textcircled{8} \quad 12 - f &= 22 \\ -12 \quad -12 \\ \hline -f &= 10 \\ \frac{-f}{-1} &= \frac{10}{-1} \\ \hline f &= -10 \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad 0.5y + 5.2 &= -2.8 \\ -5.2 \quad -5.2 \\ \hline 0.5y &= -8 \\ \frac{0.5y}{0.5} &= \frac{-8}{0.5} \\ \hline y &= -16 \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad -18 &= -4z + 12 \\ -12 \quad -12 \\ \hline -30 &= -4z \\ \frac{-30}{-4} &= \frac{-4z}{-4} \\ \hline \frac{15}{2} &= z \Rightarrow z = \frac{15}{2} \\ &\text{OR} \\ &z = 7.5 \end{aligned}$$

$$\begin{aligned} \textcircled{11} \quad -p + 10 &= -25 \\ -10 \quad -10 \\ \hline -p &= -35 \\ \frac{-p}{-1} &= \frac{-35}{-1} \\ \hline p &= 35 \end{aligned}$$

$$\begin{aligned} \textcircled{12} \quad 12 &= \frac{r}{6} + 3 \\ -3 \quad -3 \\ \hline 9 &= \frac{r}{6} \\ (-6) \cdot 9 &= \frac{r}{6} \cdot (-6) \\ \hline -54 &= r \Rightarrow r = -54 \end{aligned}$$

$$\textcircled{13} \quad 8 - \frac{h}{3} = -10$$

-8 -8

$$(-3) \cdot -\frac{h}{3} = -18 \cdot (-3)$$

$$\boxed{h = 54}$$

$$\textcircled{14} \quad 0.75q + 2.5 = -6.5$$

-2.5 -2.5

$$\frac{0.75q}{0.75} = \frac{-9}{0.75}$$

$$\boxed{q = -12}$$

$$\textcircled{15} \quad 15 = -7 - \frac{z}{6}$$

+7 +7

$$(+6) \cdot 22 = \frac{-z}{6} \cdot (-6)$$

$$-132 = z \Rightarrow \boxed{z = -132}$$

$$\textcircled{16} \quad -1.25q - 12.5 = 8.35$$

+12.5 +12.5

$$\frac{-1.25q}{-1.25} = \frac{20.85}{-1.25}$$

$$\boxed{q = -16.68}$$

$$\textcircled{17} \quad -\frac{k}{3} - \frac{1}{5} = \frac{4}{5}$$

+1/5 +1/5

$$(-3) \cdot -\frac{k}{3} = 1 \cdot (-3)$$

$$\boxed{k = -3}$$

$$\textcircled{18} \quad 9 = 2.1 - 0.25m$$

-2.1 -2.1

$$\frac{6.9}{-0.25} = \frac{-0.25m}{-0.25}$$

$$-27.6 = m \Rightarrow \boxed{m = -27.6}$$

$$\textcircled{19} \quad 9 - \frac{b}{5} = 12$$

-9 -9

$$(-5) \cdot -\frac{b}{5} = 3 \cdot (-5)$$

$$\boxed{b = -15}$$

$$\textcircled{20} \quad 11 - 2q = 5$$

-11 -11

$$\frac{-2q}{-2} = \frac{-6}{-2}$$

$$\boxed{q = 3}$$