

Solutions to WS 13.1 - Solving Equations with Grouping Symbols, #10-40 even

$$\begin{aligned} \textcircled{10} \quad -5 &= -6 - 3s + s + 1 \\ -5 &= -5 - 2s \\ 0 &= -2s \\ 0 = s &\Rightarrow s = 0 \end{aligned}$$

$$\begin{aligned} \textcircled{12} \quad (2y+5) - (y+3) + (7y-3y) &= 17 \\ 2y+5 - y-3 + 7y-3y &= 17 \\ 5y+2 &= 17 \\ 5y &= 15 \\ y &= 3 \end{aligned}$$

$$\begin{aligned} \textcircled{14} \quad (x+7) + (x-3) + (2x+11) &= 45 \\ x+7 + x-3 + 2x+11 &= 45 \\ 4x+15 &= 45 \\ 4x &= 30 \\ x &= \frac{15}{2} \end{aligned}$$

$$\begin{aligned} \textcircled{16} \quad 3(b+4) &= 24 \\ 3b+12 &= 24 \\ 3b &= 12 \\ b &= 4 \end{aligned}$$

$$\begin{aligned} \textcircled{18} \quad 3(5-r) &= 18 \\ 15-3r &= 18 \\ -3r &= 3 \\ r &= -1 \end{aligned}$$

$$\begin{aligned} \textcircled{20} \quad -5(3-d) &= 25 \\ -15+5d &= 25 \\ 5d &= 40 \\ d &= 8 \end{aligned}$$

$$\begin{aligned} \textcircled{22} \quad 4(5x-5) &= 0 \\ 20x-20 &= 0 \\ 20x &= 20 \\ x &= 1 \end{aligned}$$

$$\begin{aligned} \textcircled{24} \quad 4x - 7(x-9) &= 42 \\ 4x - 7x + 63 &= 42 \\ -3x + 63 &= 42 \\ -3x &= -21 \\ x &= 7 \end{aligned}$$

$$\begin{aligned} \textcircled{26} \quad -5(t-7) + 5 &= -5 \\ -5t + 35 + 5 &= -5 \\ -5t + 40 &= -5 \\ -5t &= -45 \\ t &= 9 \end{aligned}$$

$$\begin{aligned} \textcircled{28} \quad 0.5d - 0.7d &= 0.8 \\ -0.2d &= 0.8 \\ d &= -4 \end{aligned}$$

$$\begin{aligned} 3z + z + z &= 3.2 \\ 5z &= 3.2 \\ z &= 0.64 \end{aligned}$$

$$\begin{aligned} 32) \quad 3(a-5) &= 4 \\ 3a - 15 &= 4 \\ 3a &= 19 \\ a &= \frac{19}{3} \end{aligned}$$

$$\begin{aligned} 34) \quad x - 3(6-x) &= -14 \\ x - 18 + 3x &= -14 \\ 4x - 18 &= -14 \\ 4x &= 4 \\ x &= 1 \end{aligned}$$

$$\begin{aligned} 36) \quad -4 - (7 + 3y) &= 7 \\ -4 - 7 - 3y &= 7 \\ -11 - 3y &= 7 \\ -3y &= 18 \\ y &= -6 \end{aligned}$$

$$\begin{aligned} 38) \quad \frac{1}{3}(x-9) &= -6 \\ \frac{1}{3}x - 3 &= -6 \\ \frac{1}{3}x &= -3 \\ x &= -9 \end{aligned}$$

$$40) \quad 1 - \frac{3}{4}a - 9 = 2$$

$$-8 - \frac{3}{4}a = 2$$

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

$$-3a = 40$$

$$a = -\frac{40}{3}$$