

Solutions to WS 13.1 - Solving Equations with Grouping Symbols, #1-39 odd

$$\begin{aligned} \textcircled{1} \quad 6y + 2y &= 16 \\ 8y &= 16 \\ y &= 2 \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad 4a + 3a - 7 &= 21 \\ 7a - 7 &= 21 \\ 7a &= 28 \\ a &= 4 \end{aligned}$$

$$\begin{aligned} \textcircled{5} \quad 3 - 6t - 5t &= -19 \\ 3 - 11t &= -19 \\ -11t &= -22 \\ t &= 2 \end{aligned}$$

$$\begin{aligned} \textcircled{7} \quad -13 &= 2x - x - 10 \\ -13 &= x - 10 \\ -3 &= x \Rightarrow x = -3 \end{aligned}$$

$$\begin{aligned} \textcircled{9} \quad 1 - 6y - 4y &= 1 \\ 1 - 10y &= 1 \\ -10y &= 0 \\ y &= 0 \end{aligned}$$

$$\begin{aligned} \textcircled{11} \quad c + (c+2) + (c+4) &= 27 \\ c + c + 2 + c + 4 &= 27 \\ 3c + 6 &= 27 \\ 3c &= 21 \\ c &= 7 \end{aligned}$$

get rid of grouping by distributing first

$$\begin{aligned} \textcircled{13} \quad x + (x+3) + (x+2) + (x+7) &= 40 \\ x + x + 3 + x + 2 + x + 7 &= 40 \\ 4x + 12 &= 40 \\ 4x &= 28 \\ x &= 7 \end{aligned}$$

$$\begin{aligned} \textcircled{15} \quad 2(n-3) &= 12 \\ 2n - 6 &= 12 \\ 2n &= 18 \\ n &= 9 \end{aligned}$$

$$\begin{aligned} \textcircled{17} \quad 8(x-1) &= -24 \\ 8x - 8 &= -24 \\ 8x &= -16 \\ x &= -2 \end{aligned}$$

$$\begin{aligned} \textcircled{19} \quad -2(3-m) &= 14 \\ -6 + 2m &= 14 \\ 2m &= 20 \\ m &= 10 \end{aligned}$$

$$\begin{aligned} \textcircled{21} \quad 6(7-2t) &= 30 \\ 42 - 12t &= 30 \\ -12t &= -12 \\ t &= 1 \end{aligned}$$

$$\begin{aligned} \textcircled{23} \quad -2(3x+5) &= 2 \\ -6x - 10 &= 2 \\ -6x &= 12 \\ x &= -2 \end{aligned}$$

$$\begin{aligned} \textcircled{25} \quad 3n + 4(n-9) &= -78 \\ 3n + 4n - 36 &= -78 \\ 7n - 36 &= -78 \\ 7n &= -42 \\ n &= -6 \end{aligned}$$

$$\begin{aligned} \textcircled{27} \quad 2(7-a) - 4 &= 0 \\ 14 - 2a - 4 &= 0 \\ 10 - 2a &= 0 \\ -2a &= -10 \\ a &= 5 \end{aligned}$$

$$\begin{aligned} \textcircled{29} \quad 1.5c + 7.5c &= 1.8 \\ 9c &= 1.8 \\ c &= 0.2 \end{aligned}$$

$$\begin{aligned} \textcircled{31} \quad -4.5 &= 5n - n - n \\ -4.5 &= 3n \\ -1.5 &= n \Rightarrow n = -1.5 \end{aligned}$$

$$\begin{aligned} \textcircled{33} \quad -2(b+4) &= 11 \\ -2b - 8 &= 11 \\ -2b &= 19 \\ b &= -\frac{19}{2} \end{aligned}$$

$$\begin{aligned} \textcircled{35} \quad 6 - 22(p+6) &= 2 \\ 6 - 22p - 132 &= 2 \\ -126 - 22p &= 2 \\ -22p &= 124 \\ p &= -\frac{124}{22} \Rightarrow p = -\frac{62}{11} \end{aligned}$$

$$\begin{aligned} \textcircled{37} \quad -9 - (8 - 5t) &= 18 \\ -9 - 8 + 5t &= 18 \\ -17 + 5t &= 18 \\ 5t &= 35 \\ t &= 7 \end{aligned}$$

$$\begin{aligned} \textcircled{39} \quad \frac{2}{5}(y+10) &= 0 \\ \frac{2}{5}y + 4 &= 0 \\ \frac{2}{5}y &= -4 \\ 2y &= -20 \\ y &= -10 \end{aligned}$$