

Solving Equations That Have the Distributive Property - WS#1

Solve each equation.

$$\begin{aligned} 1) \quad & -4(3 - 3b) = -84 \\ & -12 + 12b = -84 \\ & \frac{12b}{12} = \frac{-72}{12} \\ & \boxed{b = -6} \end{aligned}$$

$$\begin{aligned} 2) \quad & 7(3 + 4r) = -147 \\ & 21 + 28r = -147 \\ & \frac{28r}{28} = \frac{-168}{28} \\ & \boxed{r = -6} \end{aligned}$$

$$\begin{aligned} 3) \quad & 2(1 + 8a) = -94 \\ & 2 + 16a = -94 \\ & \frac{16a}{16} = \frac{-96}{16} \\ & \boxed{a = -6} \end{aligned}$$

$$\begin{aligned} 4) \quad & 4(6 + 6n) = 216 \\ & 24 + 24n = 216 \\ & \frac{24n}{24} = \frac{192}{24} \\ & \boxed{n = 8} \end{aligned}$$

$$\begin{aligned} 5) \quad & 7(m - 4) = -84 \\ & 7m - 28 = -84 \\ & \frac{7m}{7} = \frac{-56}{7} \\ & \boxed{m = -8} \end{aligned}$$

$$\begin{aligned} 6) \quad & 2(1 - 8x) = 130 \\ & 2 - 16x = 130 \\ & \frac{-16x}{-16} = \frac{128}{-16} \\ & \boxed{x = -8} \end{aligned}$$

Solving Equations That Have the Dist. Prop. WS#1, cont.

$$7) -7(4+6v) = -364$$

$$\begin{array}{r} +28 \\ -28-42v = -364 \end{array}$$

$$\begin{array}{r} +28 \\ -42v = -336 \\ \hline -42 \quad -42 \end{array}$$

$$v = 8$$

$$8) -6(6x+4) = 192$$

$$\begin{array}{r} +24 \\ -36x-24 = 192 \end{array}$$

$$\begin{array}{r} +24 \\ -36x = 216 \\ \hline -36 \quad -36 \end{array}$$

$$x = -6$$

$$9) -7(x-5) = 84$$

$$\begin{array}{r} +35 \\ -7x+35 = 84 \end{array}$$

$$\begin{array}{r} +35 \\ -7x = 49 \\ \hline -7 \quad -7 \end{array}$$

$$x = -7$$

$$10) 2(-2+7p) = 108$$

$$\begin{array}{r} +4 \\ -4+14p = 108 \end{array}$$

$$\begin{array}{r} +4 \\ 14p = 112 \\ \hline 14 \quad 14 \end{array}$$

$$p = 8$$

Challenge:

$$11) 3(1+5b) + 3 = -26 + 7b$$

$$\begin{array}{r} 3+15b+3 = -26+7b \\ \hline -b \quad -b \\ 6+15b = -26+7b \\ \hline -7b \quad -7b \\ 15b = -32+7b \\ \hline 8 \quad 8 \\ 7b = -32 \end{array}$$

$$b = -4$$

$$12) -8(7+3n) + n = 34 - 5n$$

$$\begin{array}{r} -56-24n+n = 34-5n \\ \hline +5n \quad +5n \\ -56-23n = 34-5n \\ \hline +5n \quad +5n \\ -23n = 90-5n \\ \hline -18n = 90 \\ \hline -18 \quad -18 \end{array}$$

$$n = -5$$