

Algebra I

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31)	$\{-36\}$	41)	$\{8\}$	51)	$\{4\}$
33)	$\{-12\}$	43)	$\{4\}$	53)	$\{0\}$
35)	$\{-2\}$	45)	$\{6\}$	55)	$\{18\}$
37)	$\{-4\}$	47)	$\{2\}$	57)	$\{5\}$
39)	$\{-4\}$	49)	$\{-34\}$	59)	$\{7\}$

$$\begin{aligned}
 33) \quad 21 &= -\frac{3}{2}(x-2) \\
 21 &= -\frac{3}{2}x + 3 \\
 21 + 3 &= -\frac{3}{2}x + 3 + 3 \\
 (18) &= -\frac{3}{2}x + 6 \\
 \frac{36}{-3} &= \frac{-3x}{-3} \\
 -12 &= x \\
 \{-12\}
 \end{aligned}$$

$$\begin{aligned}
 37) \quad -3 &= 4(k+7) - 15 \\
 -3 + 15 &= 4(k+7) - 15 + 15 \\
 12 &= 4(k+7) \\
 \frac{12}{4} &= \frac{4(k+7)}{4} \\
 3 &= k+7
 \end{aligned}$$

$$\begin{aligned}
 37) \quad -3 &= 4(k+7) - 15 \\
 -3 + 15 &= 4(k+7) - 15 + 15 \\
 12 &= 4(k+7) \\
 12 &= 4k + 28 \\
 12 - 28 &= 4k + 28 - 28 \\
 -16 &= 4k \\
 \frac{-16}{4} &= \frac{4k}{4} \\
 -4 &= k \\
 \{-4\}
 \end{aligned}$$

$$\begin{aligned}
 41) \quad \frac{2x-1}{3} &= 5 \\
 2x-1 &= 15 \\
 2x-1+1 &= 15+1 \\
 \frac{2x}{2} &= \frac{16}{2} \\
 x &= 8 \\
 \{8\}
 \end{aligned}$$

$$\begin{aligned}
 45) \quad 1 - \frac{3}{4}(v+2) &= -5 \\
 1 + (-1) - \frac{3}{4}(v+2) &= -5 + (-1) \\
 4 \left[ -\frac{3}{4}(v+2) \right] &= [-6] 4 \\
 -3(v+2) &= -24 \\
 \frac{-3(v+2)}{-3} &= \frac{-24}{-3} \\
 v+2 &= 8
 \end{aligned}$$

$$\begin{aligned}
 45) \quad 1 - \frac{3}{4}(v+2) &= -5 \\
 1 + (-1) - \frac{3}{4}(v+2) &= -5 + (-1) \\
 -\frac{3}{4}(v+2) &= -6 \\
 4 \left( -\frac{3}{4}v - \frac{6}{4} \right) &= -6 \\
 -3v - 6 &= -24 \\
 -3v - 6 + 6 &= -24 + 6 \\
 -3v &= -18 \\
 \frac{-3v}{-3} &= \frac{-18}{-3} \\
 v &= 6 \\
 \{6\}
 \end{aligned}$$

$$\begin{aligned}
 51) \quad (x-13) - (x-5) + 2x &= 0 \\
 x - 13 - x + 5 + 2x &= 0 \\
 2x - 8 &= 0 \\
 2x - 8 + 8 &= 0 + 8 \\
 \frac{2x}{2} &= \frac{8}{2} \\
 x &= 4 \\
 \{4\}
 \end{aligned}$$

$$53) b - (1 - 2b) + (b - 3) \stackrel{\text{associative}}{=} -4$$

$$\underline{b} - 1 + \underline{2b} + \underline{b} - 3 = -4$$

$$4b - 4 = -4$$

$$55) 5m - 3[7 - (1 - 2m)] \stackrel{\text{associative}}{=} 0$$

$$5m - 3[7 - 1 + 2m] = 0$$

$$5m - 3[6 + 2m] = 0$$

$$\underline{5m} - 18 - \underline{6m} = 0$$

$$-m - 18 = 0$$

$$-m + m - 18 = 0 + m$$

$$-18 = m$$

$$\{-18\}$$

$$57) 5(g - 7) + 2[g - 3(g - 5)] = 0$$

*careful!  
can't do*

$$5g - 35 + 2[g - 3g + 15] = 0$$

$$5g - 35 + 2[-2g + 15] = 0$$

$$\underline{5g} - 35 - \underline{4g} + \underline{30} = 0$$

$$g - 5 = 0$$

$$g - g + 5 = 0 + 5$$

$$g = 5$$

$$\{5\}$$