

Feb. 27, 2018

Warmup

$$a) 4x - 9 = 7$$

$$4x = 7 + 9$$

$$\frac{4x}{4} = \frac{16}{4}$$

$$\boxed{x = 4}$$

$$b) -3x - 14 = -28$$

$$-3x - 14 + 14 = -28 + 14$$

$$\frac{-3x}{-3} = \frac{-14}{-3}$$

$$x = \frac{14}{3}$$

please not a decimal answer

Solving More Equations

Remember: x 's on one side, numbers on the other

$$a) 5x - 9 = x$$

$$5x - 9 + 9 = x + 9$$

$$5x = x + 9$$

$$5x - x = x - x + 9$$

$$\frac{4x}{4} = \frac{9}{4}$$

$$\boxed{x = \frac{9}{4}}$$

$$b) 3x + 2 = 2x + 4$$

$$3x + 2 - 2 = 2x + 4 - 2$$

$$3x = 2x + 2$$

$$3x - 2x = 2x - 2x + 2$$

$$\boxed{x = 2}$$

$$c) \quad 9x - 80 = 10x + 4$$

$$9x = 10x + 4 + 80$$

$$9x = 10x + 84$$

$$9x - 10x = 84$$

$$\frac{-1x}{-1} = \frac{84}{-1}$$

$$\boxed{x = -84}$$

$$d) \quad 3(4x-3) = 5$$

$$12x - 9 = 5$$

$$12x = 5 + 9$$

$$\underline{12}x = \underline{14}$$

$$x = \frac{14}{12} = \frac{7}{6}$$

$$e) -2(x+4) = 3(x-9)$$

$$-2x - 8 = 3x - 27$$

$$-2x = 3x - 27 + 8$$

$$-2x = 3x - 19$$

$$-2x - 3x = -19$$

$$\begin{array}{r} -5x = -19 \\ \hline -5 \qquad \qquad -5 \end{array}$$

$$x = \frac{19}{5}$$

$$f) \quad 2x + 5x - 3 - 4 = 8x + 11$$

$$7x - 7 = 8x + 11$$

$$7x - 7 + 7 = 8x + 11 + 7$$

$$7x = 8x + 18$$

$$7x - 8x = 18$$

$$\begin{array}{r} -1x = 18 \\ \hline -1 \quad \quad -1 \end{array}$$

$$\boxed{x = -18}$$

g)

$$2(x+1) + 3(3x-2) = 4(2x+5)$$

$$2x + 2 + 9x - 6 = 8x + 20$$

$$11x - 4 = 8x + 20$$

$$11x = 8x + 20 + 4$$

$$11x = 8x + 24$$

$$11x - 8x = 24$$

$$\frac{3x}{3} = \frac{24}{3}$$

$$x = 8$$

h)

$$3(2x-3) + 4(x-9) = 5(x+4)$$

$$6x - 9 + 4x - 36 = 5x + 20$$

$$10x - 45 = 5x + 20$$

$$10x = 5x + 20 + 45$$

$$10x = 5x + 65$$

$$10x - 5x = 65$$

$$\frac{5x}{5} = \frac{65}{5}$$

$$x = 13$$

$$i) \quad 5(3x - 4) + 4(2x + 5)$$

$$15x - 20 + 8x + 20$$

$$23x$$

$$23x - 20x$$

$$\frac{3x}{3}$$

$$\boxed{x =}$$

$$= 3(6x - 1) + 2(x + 5)$$

$$= 18x - 3 + 2x + 10$$

$$= 20x + 7$$

$$= 7$$

$$= 7$$

$$\frac{7}{3}$$

$$\left[\frac{7}{3} \right]$$

HW p. 200
2, 5, 9, 10, 15 a