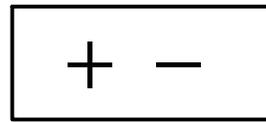


# M8 - 10.0 - blank + b = c HW



Fill in the blank and find another relationship.

$$\underline{2} + 3 = 5$$

$$5 - 3 = 2$$

$$\underline{\quad} + 3 = 7$$

$$= 4$$

$$\underline{\quad} + 4 = 9$$

$$= 5$$

$$3 + \underline{\quad} = 6$$

$$= 3$$

$$4 + \underline{\quad} = 8$$

$$= 4$$

$$2 + \underline{\quad} = 6$$

$$= 4$$

$$7 = \underline{\quad} + 3$$

$$4 =$$

$$4 = \underline{\quad} + 1$$

$$3 =$$

$$6 = \underline{\quad} + 5$$

$$1 =$$

Fill in the blank and find another relationship.

$$\underline{5} - 2 = 3$$

$$3 + 2 = 5$$

$$\underline{\quad} - 5 = 9$$

$$= 14$$

$$\underline{\quad} - 7 = 4$$

$$= 11$$

$$-7 + \underline{\quad} = 2$$

$$= 9$$

$$-12 + \underline{\quad} = 3$$

$$= 15$$

$$-9 + \underline{\quad} = 2$$

$$= 11$$

$$8 = \underline{\quad} - 3$$

$$11 =$$

$$10 = \underline{\quad} - 7$$

$$17 =$$

$$4 = \underline{\quad} - 8$$

$$12 =$$

Fill in the blank and find another relationship.

$$\underline{-2} + 10 = 8$$

$$10 - 2 = 8$$

$$\underline{\quad} + 14 = 7$$

$$= 21$$

$$\underline{\quad} + 5 = -4$$

$$= -9$$

$$\underline{\quad} - 4 = -9$$

$$= -5$$

$$\underline{\quad} - 7 = -12$$

$$= -5$$

$$\underline{\quad} - 5 = -13$$

$$= -8$$

Fill in the blank and find another relationship.

$$\underline{-7} + 3 = -4$$

$$= -7$$

$$\underline{\quad} - 4 = -2$$

$$= 2$$

$$\underline{\quad} + 2 = 6$$

$$= 4$$

$$\underline{\quad} - 4 = 7$$

$$= 11$$

$$\underline{\quad} + 8 = 3$$

$$= -5$$

$$\underline{\quad} - 6 = -3$$

$$= 3$$

$$\underline{\quad} + 2 = -7$$

$$= -9$$

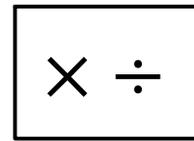
$$-4 = \underline{\quad} - 5$$

$$1 =$$

$$5 = \underline{\quad} - 3$$

$$8 =$$

M8 - 10.0 - " $a(\text{blank}) = b$ ", " $\frac{(\text{blank})}{a} = b$ " HW



Fill in the blank and write another relationship between these numbers.

$$2 \times (3) = 6$$
$$\frac{6}{2} = 3$$

$$3 \times \underline{\quad} = 12$$
$$= 4$$

$$4 \times \underline{\quad} = 12$$
$$= 3$$

$$3 \times \underline{\quad} = 18$$
$$= 6$$

$$6 \times \underline{\quad} = -12$$
$$= -2$$

$$5 \times \underline{\quad} = 15$$
$$= 3$$

$$-7 \times \underline{\quad} = 21$$
$$= -3$$

$$8 \times \underline{\quad} = 16$$
$$= 2$$

$$-2 \times \underline{\quad} = 10$$
$$= -5$$

Fill in the blank and write another relationship between the numbers.

$$\frac{8}{2} = 4$$
$$8 = 4 \times 2$$

$$\frac{\quad}{3} = 2$$
$$6 =$$

$$\frac{\quad}{5} = 6$$
$$30 =$$

$$\frac{\quad}{6} = -4$$
$$-24 =$$

$$\frac{\quad}{3} = 9$$
$$27 =$$

$$\frac{\quad}{5} = 7$$
$$35 =$$

$$\frac{\quad}{9} = 5$$
$$45 =$$

$$\frac{\quad}{-2} = 11$$
$$-22 =$$

$$\frac{1}{7} \times \underline{\quad} = 3$$
$$21 =$$

Fill in the blank.

$$\frac{2 \times \quad}{3} = 6$$

$$\frac{2 \times \quad}{9} = 4$$

$$\frac{3 \times \quad}{7} = 6$$

# M8 - 10.1 - " $x \pm a = b$ " HW

Answer should say  $x = \underline{\quad}$

Solve for  $x$ , by *subtracting to both sides*.

$$x + 3 = 5$$

$$x + 2 = 7$$

$$3 + x = 5$$

$$7 = x + 3$$

$$4 + x = 8$$

$$4 = x + 1$$

Solve for  $x$ , by *adding to both sides*.

$$x - 2 = 3$$

$$x - 5 = 9$$

$$-7 + x = 2$$

$$-12 + x = 3$$

$$8 = x - 3$$

$$-10 = x - 7$$

$$x + 4 = -3$$

$$x + 5 = -2$$

$$9 + x = -6$$

$$a + x = -b$$

$$x + 2 = 0$$

$$-3 = x + 5$$

$$0 = x + 5$$

$$10 = 9 + x$$

$$-8 = 5 + x$$

$$a = b + x$$

$$x - 7 = -4$$

$$x - a = -b$$

$$-a + x = b$$

$$-9 + x = -2$$

$$-3 + x = -2$$

$$-2 = -4 + x$$

$$5 = -2 + x$$

$$4 = -4 + x$$

$$4 = -8 + x$$

$$-b = x - a$$

# M8 - 10.1 - $-x \pm a = b$ HW

Solve for  $x$

$$5 - x = 2$$

$$4 - x = 8$$

$$-x + 5 = 2$$

$$4 = 6 - x$$

$$7 = 5 - x$$

$$-2 = 5 - x$$

Solve for  $x$

$$-x - 4 = 2$$

$$-x - 3 = -7$$

$$-3 - x = -3$$

$$3 = -2 - x$$

$$-4 = -1 - x$$

$$-5 = -4 - x$$

$$-2 = 4 - x$$

$$-8 = 6 - x$$

$$7 = 2 - x$$

$$-b = a - x$$

$$3 = 8 - x$$

$$6 - x = -10$$

$$2 - x = -3$$

$$-x + 2 = 8$$

$$-x + a = -b$$

$$-x + 4 = -3$$

$$-x - 2 = 4$$

$$-2 - x = 6$$

$$-5 - x = 2$$

$$-x - a = b$$

$$-c - x = -d$$

$$7 = -x - 5$$

$$-4 = -6 - x$$

$$3 = -x - 7$$

$$b = -x - a$$

$$-d = -c - x$$

M8 - 10.2 - " $\pm ax = b$ " HW

Answer should say  $x = \underline{\quad}$

Solve for  $x$ .

$$\begin{array}{l} 2x = 6 \\ \frac{2x}{2} = \frac{6}{2} \\ x = 3 \end{array}$$

$$\begin{array}{l} 2x = 6 \\ 2(3) = 6 \\ 6 = 6 \quad \checkmark \end{array}$$

$$5x = 45$$

$$24 = 8x$$

Solve for  $x$

$$6x = 3$$

$$4x = 2$$

$$14x = 10$$

Solve for  $x$

$$7x = 2$$

$$7x = 1$$

$$4 = 9x$$

Solve for  $x$

$$24x = 18$$

$$3x = 3$$

$$45x = 27$$

$$\begin{array}{l} 3x = 12 \\ 10x = 20 \\ 5x = 65 \\ 30 = 6x \\ 12 = 3x \\ 0 = 2x \end{array}$$

$$\begin{array}{l} 8x = 2 \\ 1x = 2 \\ bx = a \\ 20 = 15x \\ 2 = 6x \\ 0 = 2x \end{array}$$

$$\begin{array}{l} 12 = 4x \\ -12 = 9x \\ 4 = 6x \\ 2 = 10x \\ -24 = 8x \\ 16 = -4x \end{array}$$

$$\begin{array}{l} 20x = 15 \\ 4x = 0 \\ 3x = -4 \\ 6x = -12 \\ -14x = 21 \\ -2x = 0 \end{array}$$

$$\begin{array}{l} 1 = 2x \\ 5 = 3x \\ 3 = 2x \\ 3x = 1 \\ 6x = 7 \\ 5x = 2 \end{array}$$

M8 - 10.2 - " $\frac{x}{a} = b$ " HW

$$\frac{-1}{2} = \frac{1}{-2} = \frac{-1}{2}$$

$$\frac{-x}{2} = \frac{x}{-2} = \frac{-x}{2}$$

Solve for  $x$

$$\frac{x}{2} = 4$$

$$\frac{x}{3} = 2$$

$$\frac{x}{-2} = 4$$

$$-\frac{x}{2} = 4$$

$$\frac{-x}{2} = 4$$

$$\frac{x}{-3} = 5$$

$$-1 = \frac{x}{-6}$$

$$\frac{x}{-5} = 0$$

$$-\frac{x}{7} = -3$$

$$-\frac{-x}{-3} = 5$$

$$-\frac{-x}{4} = 3$$

$$\frac{3}{x} = 1$$

$$\frac{x}{5} = 6$$

$$\frac{-x}{4} = 2$$

$$10 = \frac{x}{2}$$

$$2 = \frac{-x}{-4}$$

$$\frac{x}{3} = 1$$

$$\frac{x}{-4} = 2$$

$$0 = \frac{x}{5}$$

$$-2 = -\frac{-x}{-3}$$

$$\frac{x}{-a} = -b$$

$$\frac{x}{-9} = 2$$

$$2 = \frac{x}{4}$$

$$6 = \frac{x}{-4}$$

$$\frac{x}{6} = -4$$

$$\frac{-x}{-2} = 11$$

$$-3 = \frac{x}{4}$$

$$2 = -\frac{x}{4}$$

$$\frac{x}{5} = -2$$

$$-\frac{x}{2} = 4$$

$$7 = \frac{x}{2}$$

$$8 = -\frac{x}{3}$$

M8 - 10.2 - " $\frac{ax}{b} = c$ " HW

$$\frac{ax}{b} = \frac{a}{b}x$$

$$\frac{2x}{3} = \frac{2}{3}x$$

$$\frac{ax}{b} = \frac{a}{b}x$$

Solve for  $x$

$$\frac{2x}{3} = 6$$

$$\frac{2}{3}x = 6$$

$$4 = \frac{2}{3}x$$

$$\frac{2x}{-9} = 4$$

$$10 = -\frac{20x}{5}$$

$$\frac{ax}{b} = c$$

$$\frac{4}{5}x = 6$$

$$-\frac{1}{7}x = 3$$

$$-\frac{-3x}{-7} = -6$$

$$\frac{2x}{5} = 4$$

$$\frac{10x}{3} = 2$$

$$\frac{3x}{5} = 6$$

$$\frac{9x}{2} = 3$$

$$6 = \frac{3}{4}x$$

$$2 = \frac{1x}{8}$$

$$4 = \frac{-2x}{7}$$

$$-4 = \frac{3x}{9}$$

$$\frac{12}{-4}x = -3$$

$$-\frac{5x}{7} = -10$$

$$\frac{ax}{-b} = c$$

$$-5 = \frac{-15x}{-2}$$

$$0 = \frac{-3x}{2}$$

$$1 = \frac{2x}{5}$$

# M8 - 10.3 - " $\frac{a}{x} = b$ " HW

Solve for  $x$

$$\begin{aligned} \frac{4}{x} &= 2 \\ \frac{4}{x} &= 2 \times x \\ \cancel{x} \frac{4}{\cancel{x}} &= 2 \times x \\ 4 &= 2x \\ \frac{4}{2} &= \frac{2x}{2} \\ 2 &= x \\ \boxed{x = 2} \end{aligned}$$

$$\begin{aligned} \frac{4}{x} &= 2 \\ \frac{4}{4} &= 2 \\ \frac{2}{2} &= 2 \\ 2 &= 2 \quad \checkmark \end{aligned}$$

$$\frac{3}{x} = 9$$

$$15 = \frac{6}{x}$$

$$\frac{-4}{x} = 2$$

$$\frac{-1}{x} = 4$$

$$\frac{3}{x} = -5$$

$$14 = \frac{-7}{x}$$

$$-5 = \frac{25}{x}$$

$$-6 = \frac{24}{x}$$

$$\begin{aligned} 12 &= \frac{3}{x} \\ 4 &= \frac{8}{x} \\ 2 &= \frac{10}{x} \end{aligned}$$

$$\begin{aligned} \frac{14}{x} &= 7 \\ \frac{x}{5} &= 10 \\ \frac{x}{9} &= -6 \end{aligned}$$

$$\begin{aligned} -15 &= -\frac{45}{x} \\ 22 &= \frac{-2}{x} \end{aligned}$$

$$\begin{aligned} -\frac{8}{x} &= 24 \\ \frac{-6}{x} &= -27 \\ \frac{a}{x} &= b \end{aligned}$$

M8 - 10.3 - " $\frac{a}{bx} = c$ " HW

Answer should say  $x = \underline{\hspace{2cm}}$

Solve for  $x$

$$\frac{24}{2x} = 3$$

$$\frac{16}{4x} = 2$$

$$\frac{-27}{3x} = 9$$

$$1 = \frac{3}{2x}$$

$$5 = \frac{3}{4x}$$

$$\frac{10}{3x} = 5$$

$$\frac{4}{-3x} = 6$$

$$3 = \frac{12}{6x}$$

$$0 = \frac{1}{2x}$$

$$3 = \frac{60}{4x}$$

$$4 = \frac{40}{5x}$$

$$\frac{3}{5x} = 2$$

$$\frac{2}{3x} = 5$$

$$\frac{5}{2x} = 5$$

$$\frac{15}{3x} = 5$$

$$\frac{36}{3x} = 4$$

$$\frac{4}{-3x} = 8$$

$$\frac{90}{3x} = -5$$

$$\frac{4}{5x} = 3$$

$$\frac{2}{5x} = 7$$

$$\frac{5}{-2x} = -3$$

$$M8 - 10.4 - \frac{ax}{bx} = \frac{c}{d} \text{ HW}$$

$$\frac{ax}{b} = \frac{a}{b}x$$

Solve for  $x$  by cross multiplying.

$$\begin{aligned} \frac{2x}{6} &= \frac{4}{3} \\ 3 \times 2x &= 4 \times 6 \\ 6x &= 24 \\ \frac{6x}{6} &= \frac{24}{6} \\ x &= 4 \end{aligned}$$

$$\begin{aligned} \frac{2x}{6} &= \frac{4}{3} \\ 2(4) &= \frac{4}{3} \\ \frac{8}{6} &= \frac{4}{3} \\ \frac{4}{3} &= \frac{4}{3} \end{aligned}$$

$$\begin{aligned} \frac{2}{3}x &= \frac{5}{7} \\ 7 \times 2x &= 5 \times 3 \\ 14x &= 15 \\ \frac{14x}{14} &= \frac{15}{14} \\ x &= \frac{15}{14} \end{aligned}$$

$$\begin{aligned} \frac{2}{3}x &= \frac{5}{7} \\ \frac{2}{3} \left( \frac{15}{14} \right) &= \frac{5}{7} \\ \frac{5}{7} &= \frac{5}{7} \end{aligned}$$

$$\frac{2}{3}x = \frac{4}{5}$$

$$\frac{2}{7}x = \frac{1}{4}$$

$$\frac{9}{4}x = \frac{7}{2}$$

$$\frac{1}{8} = \frac{2}{4}x$$

$$\frac{4}{3x} = \frac{2}{3}$$

$$\frac{2}{3x} = \frac{4}{3}$$

$$\frac{1}{8} = \frac{2}{4x}$$

$$\begin{aligned} \frac{2}{9}x &= \frac{2}{9} \\ \frac{1}{9}x &= \frac{2}{9} \\ \frac{3}{5}x &= \frac{9}{10} \end{aligned}$$

$$\begin{aligned} \frac{3x}{4} &= \frac{6}{8} \\ -3x &= \frac{6}{2} \\ \frac{5}{4} &= \frac{7}{6} \\ \frac{5}{5}x &= \frac{6}{7} \end{aligned}$$

$$\begin{aligned} \frac{2x}{3} &= \frac{1}{2} \\ \frac{1x}{-9} &= \frac{2}{7} \\ \frac{a}{b}x &= \frac{c}{d} \end{aligned}$$

$$\begin{aligned} \frac{5}{x} &= \frac{7}{4} \\ \frac{3}{3} &= \frac{9}{9} \\ \frac{3x}{5} &= \frac{2}{10} \\ \frac{5}{2} &= \frac{7}{2x} \end{aligned}$$

$$\begin{aligned} -\frac{1}{2x} &= \frac{-2}{7} \\ -\frac{2x}{a} &= \frac{a}{bx} \end{aligned}$$

# M8 - 10.5 - " $\pm ax + b = c$ " HW

Answer should say  $x = \underline{\hspace{2cm}}$

*Solve for x*

$$2x + 3 = 9$$

$$3x + 6 = 12$$

$$-5 = 2x + 3$$

$$2 + 3x = 2$$

$$-2x + 4 = 8$$

$$-3x + 8 = 17$$

$$4 = 2 - 2x$$

$$-2 = 7 - 3x$$

$$\begin{aligned} 4x + 8 &= -4 \\ 5x + 10 &= 30 \\ 2x + 9 &= 27 \\ 2x - 3 &= 9 \end{aligned}$$

$$\begin{aligned} 22 &= 8x + 6 \\ 18 &= 2x + 4 \\ -7 &= 2x + 3 \\ -4 &= 4x - 8 \end{aligned}$$

$$\begin{aligned} 4x - 8 &= -4 \\ 5x - 10 &= 30 \\ 3x - 2 &= -2 \\ 3x - 6 &= 12 \end{aligned}$$

$$\begin{aligned} 4 - 6x &= -12 \\ 8 - 3x &= 32 \\ 5 - 7x &= -16 \\ -5 - 7x &= -26 \end{aligned}$$

$$\begin{aligned} -5x + 10 &= -20 \\ -4x + 5 &= 21 \\ -2x - 4 &= 8 \\ -4x - 5 &= 19 \end{aligned}$$

# M8 - 10.5 - " $\frac{\pm x}{a} + b = c$ " HW

**Solve for x**

$$\frac{x}{2} + 3 = 7$$

$$\frac{x}{3} + 4 = 5$$

$$7 + \frac{x}{6} = 5$$

$$\frac{1}{2}x - 3 = 9$$

$$\frac{x}{-2} + 3 = 7$$

$$\frac{x}{-3} + 4 = 5$$

$$\frac{x}{4} + 4 = 2$$

$$-5 = \frac{x}{9} + 7$$

$$\frac{x}{-2} - 3 = 9$$

$$\frac{x}{-4} + 4 = 2$$

$$2 + \frac{-x}{7} = 3$$

$$\frac{x}{5} + 2 = 12$$

$$-2 = -2 + \frac{x}{8}$$

$$-2 - \frac{x}{7} = 3$$

$$\frac{x}{-5} + 2 = 12$$

$$7 - \frac{x}{6} = 5$$

$$\frac{x}{4} - 4 = 2$$

$$5 = \frac{x}{9} + 2$$

$$-7 + \frac{x}{6} = -5$$

$$\frac{x}{-5} - 2 = 6$$

$$-7 - \frac{x}{6} = -5$$

$$\frac{x}{5} - 2 = 6$$

$$-2 = -2 + \frac{x}{8}$$

$$-2 + \frac{x}{7} = 3$$

$$\frac{x}{-3} - 4 = 5$$

# M8 - 10.6 - " $a(x + b) = c$ " Distributing HW

Solve for  $x$

$$2(x - 2) = 4$$

$$-3(x + 2) = 3$$

$$-2(x - 1) = 6$$

$$-6(x - 5) = 30$$

$$3(x + 2) = 10$$

$$4(x - 1) = 15$$

$$5(x - 2) = 10$$

$$4(x - 2) = 4$$

$$2(x + 3) = 8$$

$$5(x + 2) = 25$$

$$-6(x + 2) = 18$$

$$-4(x - 4) = -64$$

$$9 = 3(x - 3)$$

$$18 = -3(4 - x)$$

$$15 = -3(x + 6)$$

$$5(x - 1) = -17$$

$$-2(x + 2) = 19$$

$$-7(1 - x) = 2$$

$$-2(x + 4) = -10$$

$$-3(1 + x) = 9$$

$$2(x - 3) = 7$$

# M8 - 10.6 - " $\frac{a}{b}(\frac{x}{c} + \frac{d}{e}) = \frac{f}{g}$ " Distributing HW

Solve for  $x$

$$\frac{1}{2}(x - 2) = 4$$

$$\frac{1}{3}(x + 2) = 3$$

$$\frac{2}{3}(x + 1) = 4$$

$$\frac{1}{5}(x + 2) = \frac{3}{5}$$

$$-3\left(\frac{1}{2} + x\right) = \frac{21}{2}$$

$$-2\left(\frac{1}{3} + x\right) = \frac{32}{3}$$

$$9 = 3(x - 3)$$

$$18 = \frac{1}{3}(4 + x)$$

$$\frac{1}{4}(x - 3) = 6$$

$$\frac{1}{2}(x - 2) = 6$$

$$\frac{1}{3}(x + 1) = \frac{5}{3}$$

$$\frac{1}{4}(x - 2) = \frac{5}{4}$$

$$-\frac{3}{2}\left(\frac{1}{2} + x\right) = \frac{39}{4}$$

$$-\frac{1}{4}\left(2x - \frac{1}{2}\right) = \frac{23}{8}$$

# M8 - 10.6 - " $\frac{a}{x+b} = c$ " Distributing HW

Solve for  $x$

$$\frac{15}{x+3} = 5$$

$$\frac{20}{x-2} = 20$$

$$\frac{5}{2x+1} = 1$$

$$\frac{100}{1-2x} = 10$$

$$\frac{x+3}{x-2} = 6$$

$$4 = \frac{x+3}{x-3}$$

$$\frac{6}{\frac{x+1}{12}} = 2$$
$$\frac{6}{x-2} = 6$$

$$\frac{6}{5x-2} = 3$$
$$\frac{6}{x-1} = 5$$

$$\frac{x+8}{x-1} = 4$$
$$\frac{5}{2} = \frac{x+3}{x-3}$$

# M8 - 10.7 - LCD " $x + \frac{b}{c} = \frac{d}{e}$ " HW

Solve for  $x$  by multiplying each term by the LCD

$$\begin{aligned}
 x - 1 &= \frac{1}{2} \\
 2 \times (x - 1) &= \frac{1}{2} \times 2 \\
 2x - 2 &= 1 \\
 +2 & \quad +2 \\
 \frac{2x}{2} &= \frac{3}{2}
 \end{aligned}$$

$$x = \frac{3}{2}$$

$$\begin{aligned}
 x - 1 &= \frac{1}{2} \\
 \left(\frac{3}{2}\right) - 1 &= \frac{1}{2} \\
 \frac{3}{2} - \frac{2}{2} &= \frac{1}{2} \\
 \frac{1}{2} &= \frac{1}{2} \quad \checkmark
 \end{aligned}$$

$$x - 1 = \frac{1}{4}$$

$$\frac{1}{5} = x + 1$$

$$3 + x = \frac{1}{3}$$

$$\begin{aligned}
 x + \frac{1}{6} &= \frac{1}{3} \\
 6 \times \left(x + \frac{1}{6}\right) &= \frac{1}{3} \times 6 \\
 6x + \frac{6}{6} &= \frac{6}{3} \\
 6x + 1 &= 2 \\
 -1 & \quad -1 \\
 \frac{6x}{6} &= \frac{1}{6}
 \end{aligned}$$

$$x = \frac{1}{6}$$

$$\begin{aligned}
 x + \frac{1}{6} &= \frac{1}{3} \\
 \left(\frac{1}{6}\right) + \frac{1}{6} &= \frac{1}{3} \\
 \frac{2}{6} &= \frac{1}{3} \\
 \frac{1}{3} &= \frac{1}{3} \quad \checkmark
 \end{aligned}$$

$$\frac{1}{4} + x = \frac{1}{3}$$

$$\begin{aligned}
 x - \frac{1}{4} &= \frac{1}{2} \\
 x - \frac{1}{6} &= -\frac{1}{3}
 \end{aligned}$$

$$\begin{aligned}
 2 &= x - \frac{3}{4} \\
 5 &= \frac{1}{2} - \frac{x}{3}
 \end{aligned}$$

$$\begin{aligned}
 x + \frac{1}{4} &= \frac{2}{3} \\
 \frac{x}{2} + \frac{1}{4} &= \frac{1}{2}
 \end{aligned}$$

$$\begin{aligned}
 2 + x &= \frac{7}{2} \\
 \frac{3}{2} + \frac{x}{2} &= \frac{5}{4}
 \end{aligned}$$

# M8 - 10.8 - " $ax + b = cx + d$ " HW

Solve for  $x$

$$\begin{array}{r} 2x = 4 + x \\ -x \quad -x \end{array}$$

$$x = 4$$

$$\begin{array}{r} 2x = 4 + x \\ 2(4) = 4 + 4 \\ 8 = 8 \end{array}$$

$$2x = 3 + x$$

$$2x = 5 + x$$

$$4x = 16 + 3x$$

$$4x = 12 + 2x$$

$$6x = 5x - 9$$

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

$$6x + 2 = 5x - 6$$

$$2x + 1 + 3x = 2 + 4x$$

$$\begin{array}{r} -3x = 18 - 4x \\ 8x = -12 + 4x \end{array}$$

$$\begin{array}{r} -33 + 3x = 14x \\ 10 + 4x = 9x \\ 6 + 5x = 3x \end{array}$$

$$\begin{array}{r} 5x - 3 = 3x - 1 \\ 6x + 4 = 2x + 12 \end{array}$$

$$\begin{array}{r} 7x + 5 = 2x + 5 \\ 3x - 4 = 2x - 9 \end{array}$$

# M8 - 10.8 - " $ax + b = cx + d$ " HW

Solve for  $x$

$$\begin{array}{r} 2x + 3 = 4 + x \\ -x \quad -x \\ \hline x + 3 = 4 \\ -3 \quad -3 \\ \hline \end{array}$$

$$x = 1$$

$$\begin{array}{l} 2x + 3 = 4 + x \\ 2(1) + 3 = 4 + (1) \\ 5 = 5 \quad \checkmark \end{array}$$

$$5x - 9 = -4x + 18$$

$$-2x - 1 = 4x + 2$$

$$5x - 4 = 4 - 3x$$

$$\begin{array}{r} 2x + 4 + x = 13 \\ 3x + 4 = 13 \\ -4 \quad -4 \\ \hline 3x = 9 \\ \frac{3x}{3} = \frac{9}{3} \end{array}$$

$$x = 3$$

$$\begin{array}{l} 2x + 4 + x = 13 \\ 2(3) + 4 + (3) = 13 \\ 13 = 13 \quad \checkmark \end{array}$$

$$4x - 5 + x = 7 - x$$

$$\begin{array}{l} 4x + 3 = 3x + 12 \\ 3x + 2 = 2x + 3 \end{array}$$

$$\begin{array}{l} 3x + 2 = 6 + x \\ 2x - 8 = 4 - 4x \\ 2x - 3 = 8x - 12 \end{array}$$

$$\begin{array}{l} -3x = 2 + 11x - 6 \\ 5x + 2x + 6 + 1 = 0 \\ 4x - 5 + x = 7 - x \end{array}$$

$$\begin{array}{l} x - 5x + 3 = -9 \\ 5 - 2x + 3 = 2x \end{array}$$

## M8 - 10.9 - Creating/Solving Equations HW

Write a let statement, create an equation, solve the equation, find the number, circle your answer, check your answer, state the number in a sentence.

Five more than a number is seven.

The sum of the number and 17 is 65.  
A number increased by 13 is 51.  
12 added to a number is 71.

A number decreased by eight is ten.

Five subtracted from a number is 67.  
21 less than the number is 37.  
The difference between  $x$  and 5 is  $3^*$ .  
And number minus 11 is 76  
A number less than three is one.

A number subtracted from seven is five.

39 decreased by a number is 12.  
The difference between  $x$  and 2 is  $3^*$ .  
The difference between  $x$  and 13 is  $45^*$ .

Two times a number plus 6 equals 18.

A number multiplied by five decreased by seven is 23.  
The product of a number and seven added to three is 94.  
Five less than nine times a number is 148.  
75 exceeds three times the number by 24.

## M8 - 10.9 - Creating/Solving Equations HW

Write a let statement, create an equation, solve the equation, find the number, circle your answer, check your answer, state the number in a sentence.

Three times a number less than 12 is six.

Seven times a number less than 96 is 40.  
17 decreased by twice a number is nine.  
One quarter a number +10 equals 30.

Twice the sum of the number and five is 30.

Triple the difference of a number and two is 18.  
Half the sum of the number and five is 20.  
The sum of twice a number and 4 all divided by 2 is 9.

Twice the sum of the number and one equals four less than three times the number

Five more than one half the number equals twice the number.  
Two thirds of a number minus 10 is half the number plus ten.  
One half the number minus 40 equals  $\frac{1}{5}$  of a number minus 10.

## M8 - 10.9 - One vs Two Variable Equations HW

Write let statements, create an equation, solve the equation, find the numbers, circle your answers, check your answers, state the numbers in a sentence.

Two numbers sum to 24. The 2nd is four more than the 1st.

Two numbers sum to 44. The 2nd is one less than twice the 1st.  
Two numbers sum to 33. The 2nd is twice the sum of the 1st and 3\*.

A number is six less than another.  
Twice the sum of the first number and one is equal to triple the second.

The difference between two numbers is five.  
Twice the larger equals quadruple the smaller\*.

## M8 - 10.9 - 2/3 Number/Consecutive Equations HW

Write a let statements, create an equation, solve the equation, find the numbers, circle your answers, check your answers, state the numbers in a sentence.

The sum of three numbers is 32. The 2nd number is twice the 1st. The 3rd is two more than the 1st.

The sum of three numbers is 43. The 2nd number is triple the 1st. The 3rd number is one more than the 2nd number.

The sum of three numbers is 75. The 2nd number is two less than triple the 1st. The 3rd number is five more than the 2nd.

The sum of two consecutive numbers is five.

The sum of two consecutive numbers is 31.  
The sum of two consecutive numbers is 77.

The sum of three consecutive numbers is 51.

The sum of three consecutive numbers is negative 6  
The sum of three consecutive numbers is 204.

## M8 - 10.9 - 2/3 Number/Consecutive Equations HW

Write a let statements, create an equation, solve the equation, find the numbers, circle your answers, check your answers, state the numbers in a sentence.

Find two consecutive even integers whose sum is 14.

Find two consecutive even integers whose sum is 26.  
Find two consecutive odd integers whose sum is 28.

Find three consecutive integers such that five more than triple the 1st is six more than double the 3rd.

Find four consecutive integers such that the 2nd and the 4th is 114.

Find three consecutive integers such if that you doubled the sum it would equal 72.

Find three consecutive integers such that the sum decreased by the second integer equals 32.

Find three consecutive integers such that twice the sum minus triple the third equals 6.

Find four consecutive integers such that the sum of the 1st and the 4th equals the sum of the 2nd and the 3rd\*\*.

## M8 - 10.9 - Age/Now-Then Equations HW

Write let statements, create an equation, solve the equation, find the numbers, circle your answers, check your answers, state the numbers in a sentence.

Two years less than Bob's age is 22 less than double his age.

Three years more than twice Amanda's age is seven less than triple her age.

Five more than Pat's age is 15 less than double Pat's age.

A year ago Bob was one less than twice his age 5 years ago.

Two years from now Alex is twice his age.

Twice Kiera's age in five years from now is 10 less than triple her age now.