

# Worksheet

$$1) 3.50x + 5.50x + 6 = 51$$

$$9x + 6 = 51$$

$$\begin{array}{r} -6 \quad -6 \\ 9x = 45 \end{array}$$

$$\frac{9x}{9} = \frac{45}{9}$$

$$x = 5$$

5 people.

$$4(c+5) = 54$$

$$2) 4c + 4 \times 5 = 54$$

$$4c + 20 = 54$$

$$\begin{array}{r} -20 \quad -20 \\ 4c = 34 \end{array}$$

$$\frac{4c}{4} = \frac{34}{4}$$

$$c = 8.5$$

$$3. 6(3m+5) = 66$$

$$18m + 30 = 66$$

$$\begin{array}{r} -30 \quad -30 \\ 18m = 36 \end{array}$$

$$\frac{18m}{18} = \frac{36}{18}$$

$$m = 2$$

$$4. -5(x-3) = -25$$

$$(-5 \cdot x) - (5(-3)) = -25$$

$$-5x + 15 = -25$$

$$\begin{array}{r} -15 \quad -15 \\ -5x = -40 \end{array}$$

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

$$x = 8$$

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

$$12 \left( \frac{x}{3} - \frac{1}{2} \right) = \frac{3}{4} \cdot 12 \cdot 3$$

$$4x - 6 = 9$$

$$\begin{array}{r} +6 \quad +6 \\ 4x = 15 \end{array}$$

$$\frac{4x}{4} = \frac{15}{4}$$

$$x = \frac{15}{4}$$

$$\frac{15}{4}$$

$$6. \frac{b}{9} - \frac{1}{2} = \frac{5}{18}$$

$$18 \left( \frac{b}{9} - \frac{1}{2} \right) = \frac{5}{18} \cdot 18$$

$$2b - 9 = 5$$

$$\begin{array}{r} +9 \quad +9 \\ 2b = 14 \end{array}$$

$$\frac{2b}{2} = \frac{14}{2}$$

$$b = 7$$

$$7.) 250 + 14h = 22h$$

$$-14h \quad -14h$$

$$250 = 8h$$

$$\frac{250}{8} = \frac{8h}{8}$$

$$31.25 = h$$

more than

$$31 \frac{1}{4} \text{ hr.}$$



$$8) \begin{array}{r} 295 + 39d = 350 + 33d \\ -295 - 33d \quad -295 - 33d \\ \hline 6d = 55 \end{array}$$

$$\frac{6d}{6} = \frac{55}{6}$$

$$d = \frac{55}{6}$$

$$= 9\frac{1}{6}$$

less than 10 days

$$9) \begin{array}{r} 7(h+3) = 6(h-3) \\ 7h + 21 = 6h - 18 \\ -6h - 21 \quad -6h - 21 \\ \hline h = -39 \end{array}$$

$$7h + 21 = 6h - 18$$

$$-6h - 21 \quad -6h - 21$$

$$h = -39$$

$$10) \begin{array}{r} -(5a+6) = 2(3a+8) \\ -5a-6 = 6a+16 \\ -6a+6 \quad -6a+6 \\ \hline -11a = 22 \\ -11 \quad -11 \\ \hline a = -2 \end{array}$$

$$-5a-6 = 6a+16$$

$$-6a+6 \quad -6a+6$$

$$-11a = 22$$

$$-11 \quad -11$$

$$a = -2$$

$$11) \begin{array}{r} 4(3m+4) = 2(6m+8) \\ 12m+16 = 12m+16 \end{array}$$

$$12m+16 = 12m+16$$

all real numbers

are a solution

identity

12)

$$5x+2x-3 = -3x+10x$$

$$7x-3 = -3x+10x$$

$$7x-3 = 7x$$

$$-7x \quad -7x$$

$$-3 = 0$$

no solution

-3 can never

equal 0

$$13) \begin{array}{r} \text{area} = 180 \\ \text{width} = 12 \end{array}$$

$$\text{width} = 12$$

$$a = bh \text{ or } lw$$

$$a = lw$$

$$180 = \frac{l}{12} \cdot 12$$

$$\frac{180}{12} = \frac{l}{12}$$

$$15 = l$$

$$14) \begin{array}{r} 4k+mn = n-3 \\ \text{solve } n \end{array}$$

$$4k+mn = n-3$$

$$+3 \quad +3$$

$$4k+mn+3 = n$$

$$-mn \quad = -mn$$

$$4k+3 = n-mn$$

$$4k+3 = n(1-m)$$

$$\frac{4k+3}{1-m} = \frac{n(1-m)}{(1-m)}$$

$$\frac{4k+3}{1-m} = n$$



$$15. \frac{c}{d} + 2 = \frac{f}{g}$$

Solve for c

$$\frac{c}{d} + \cancel{2} = \frac{f}{g} - \cancel{2}$$

$$\frac{d}{1} \left( \frac{c}{d} \right) = \left( \frac{f}{g} - 2 \right) \frac{d}{1}$$

$$c = \frac{(f-2)d}{g}$$