

$$\begin{array}{r}
 1) \quad 6k + 2 = 24 \\
 \quad \quad -2 \quad \quad -2 \\
 \hline
 \quad \quad 6k = 24 \\
 \quad \quad \underline{6} \quad \quad \underline{6} \\
 \quad \quad k = 4
 \end{array}$$

Quiz
3.1-3.3

$$\begin{array}{r}
 2) \quad 15n - 62 = 73 \\
 \quad \quad +62 \quad \quad +62 \\
 \hline
 \quad \quad 15n = 135 \quad 27 \cdot 9 \\
 \quad \quad \underline{15} \quad \quad \underline{15} \quad 3 \cdot 1 \\
 \quad \quad n = 9
 \end{array}$$

$$\begin{aligned} 3) \quad & -\frac{x}{3} + 10 = 18 \\ & \quad \quad \quad -10 \quad \quad -10 \\ & \hline & 3\left(-\frac{x}{3}\right) = (8)3 \\ & \quad \quad \quad -x = 24 \\ & \quad \quad \quad \underline{-1} \quad \quad \underline{-1} \\ & \quad \quad \quad x = -24 \end{aligned}$$

4)

$$\underline{8m} + 7 + \underline{m} = 16$$

$$9m + 7 = 16$$

$$\begin{array}{r} -7 \\ -7 \end{array}$$

$$\frac{9m}{9} = \frac{9}{9}$$

$$m = 1$$

$$\begin{aligned} 5) \quad & -2(a+16) = 2 \\ & \underline{-2(a)} + \underline{(-2)(16)} = 2 \\ & -2a + \begin{array}{r} -32 \\ +32 \end{array} = \begin{array}{r} 2 \\ +32 \end{array} \\ & \hline & \begin{array}{r} -2a = 34 \\ \underline{-2} \quad \underline{-2} \\ a = -17 \end{array} \end{aligned}$$

$$\begin{array}{r}
 51 \\
 256 \\
 \hline
 21
 \end{array}$$

6)

$$-35 = 7(z - 8)$$

$$-35 = 7(z + -8)$$

$$-35 = 7(z) + 7(-8)$$

$$\begin{array}{r}
 -35 = 7z + -56 \\
 +56 \qquad \qquad \qquad +56 \\
 \hline
 21 = 7z
 \end{array}$$

$$\frac{21}{7} = \frac{7z}{7}$$

$$3 = z$$

$$\begin{array}{r} 8) \quad 4b \ominus 100 = -1b \\ \underline{-4b} \qquad \qquad \qquad \underline{-4b} \\ -100 = \underline{-5b} \\ \underline{-5} \qquad \qquad \qquad \underline{-5} \\ \underline{20 = 1b} \end{array}$$

$$10) \quad 16h = 8(2h - 10)$$

$$16h = 8(2h + -10)$$

$$16h = \underline{8(2h)} + \underline{8(-10)}$$

$$16h = 16h + -80$$

False

$$\begin{array}{r} 16h \\ -16h \\ \hline \end{array}$$

$$\begin{array}{r} 16h \\ -16h \\ \hline \end{array}$$

$$\rightarrow 0 = -80$$

Not Possible

No
Solutions

$$12) \quad 8c + 10 = 2(4c + 5)$$
$$= 2(4c) + 2(5)$$

$$8c + 10 = 8c + 10$$
$$\begin{array}{r} 8c + 10 \\ -8c \\ \hline 10 = 10 \end{array}$$

$10 = 10$ always
True

Identity

Any real no.
would work

13) \$125 - new parts
 \$68 - hr.

$$TC = \$329$$

TC = parts + mechanic

$$329 = 125 + 68 \cdot h$$

$$\begin{array}{r} \cancel{51204} \\ 3 \quad \cancel{68} \\ \hline 177 \end{array} = \frac{\cancel{68}h}{68}$$

$$h = 3$$

$$14) \quad \begin{array}{l} \text{Ad.} \rightarrow \$3 \\ \text{L} \rightarrow \$6 \end{array} \quad \begin{array}{l} \text{bus} \\ 55 \end{array}$$

Club \$244

$$244 = 55 + 2x + 6x$$

$$\begin{array}{r} 244 \\ -55 \\ \hline 189 \end{array} = 55 + 9x$$

$$\begin{array}{r} 21 \\ \overline{)189} \\ \underline{18} \\ 9 \\ \underline{9} \\ 0 \end{array} \quad \begin{array}{r} 9x \\ \underline{9x} \\ 0 \end{array}$$

$$1x = 21$$

$$15) \quad \begin{array}{r} 2x = x + 25 \\ -1x \quad -1x \\ \hline \end{array}$$

$$x = 25$$

$$2x = 2(25) = 50$$

$$4(50) = 200 \text{ units}$$

$$\begin{array}{r} 25 \\ x + 25 \end{array} \square$$

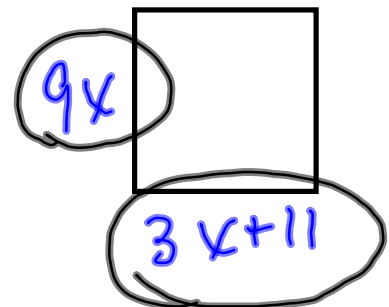
$$2x$$

$$16) \quad \begin{array}{r} 9x = 3x + 11 \\ -3x \quad -3x \\ \hline \end{array}$$

$$\frac{6x}{6} = \frac{11}{6}$$

$$x = \frac{11}{6}$$

$$P = 4^2 \left(\frac{33}{2} \right) = 66 \text{ units}$$

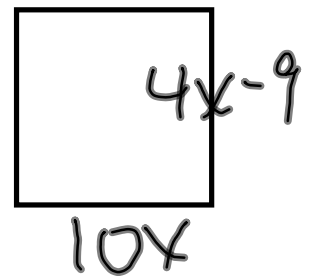


Side

$$4^3 \left(\frac{11}{6} \right) = \frac{33}{2}$$

$$16) P = 4(4x-9) = 16x - 36$$

$$P = 10x + 10x + 4x - 9 + 4x - 9$$



$$P = 28x - 18$$

$$4x - 9 = 10x$$

finds x

$$P = 4(10x) = 40x$$