

Chapter 1 Review

Solve the equation.

1) $4 - c = -3$ $\begin{array}{r} -4 \quad -4 \\ -c = -7 \\ \frac{-c}{-1} = \frac{-7}{-1} \\ \boxed{c = 7} \end{array}$	2) $-24 = x - 18$ $\begin{array}{r} +18 \quad +18 \\ \boxed{-6 = x} \end{array}$
3) $\frac{4}{3} \cdot \frac{3}{4} s = 12$ $\begin{array}{r} \cdot \frac{4}{3} \\ \boxed{s = 16} \end{array}$	4) $4r = -36$ $\begin{array}{r} \frac{4r}{4} = \frac{-36}{4} \\ \boxed{r = -9} \end{array}$
5) $2d - 15 = 3$ $\begin{array}{r} +15 \quad +15 \\ 2d = 18 \\ \frac{2d}{2} = \frac{18}{2} \\ \boxed{d = 9} \end{array}$	6) $4 = \frac{m}{4} - 8$ $\begin{array}{r} +8 \quad +8 \\ 4 \cdot 12 = \frac{m}{4} \cdot 4 \\ \boxed{48 = m} \end{array}$
7) $-3(n + 6) + 10 = -8$ $\begin{array}{r} -3n - 18 + 10 = -8 \\ -3n - 8 = -8 \\ +8 \quad +8 \\ -3n = 0 \\ \frac{-3n}{-3} = \frac{0}{-3} \\ \boxed{n = 0} \end{array}$	8) $3(q - 2) = -6 + 3q$ $\begin{array}{r} 3q - 6 = -6 + 3q \\ -3q \quad -3q \\ -6 = -6 \\ \boxed{\text{All real solutions}} \end{array}$

$$9) -4p = 3p + 28$$

$$\begin{array}{r} -3p \quad -3p \\ -4p = 3p + 28 \\ \hline -7p = 28 \\ \hline \frac{-7p}{-7} = \frac{28}{-7} \end{array}$$

$$\frac{-7p}{-7} = \frac{28}{-7}$$

$$\boxed{p = -4}$$

$$10) -2y - 4 = 4(y - 1)$$

$$\begin{array}{r} -2y - 4 = 4y - 4 \\ +2y \quad +2y \\ \hline -4 = 6y - 4 \\ +4 \quad +4 \end{array}$$

$$\frac{0}{6} = \frac{6y}{6}$$

$$\boxed{0 = y}$$

$$11) 3(k + 5) = -2(3k - 6)$$

$$\begin{array}{r} 3k + 15 = -6k + 12 \\ +6k \quad +6k \end{array}$$

$$\begin{array}{r} 9k + 15 = 12 \\ -15 \quad -15 \end{array}$$

$$\frac{9k}{9} = \frac{-3}{9}$$

$$\boxed{k = -\frac{1}{3}}$$

$$12) 8m + 2 + 4m = 2(6m + 1)$$

$$8m + 2 + 4m = 12m + 2$$

$$\begin{array}{r} 12m + 2 = 12m + 2 \\ -12m \quad -12m \end{array}$$

$$2 = 2$$

$$\boxed{\text{All real solutions}}$$

Solve the equation for y.

$$13) 5x - 5y = 10$$

$$\begin{array}{r} -5x \quad -5x \\ 5x - 5y = 10 \end{array}$$

$$\begin{array}{r} -5y = 10 - 5x \\ -5 \quad -5 \end{array}$$

$$\boxed{y = \frac{10 - 5x}{-5}}$$

$$\text{or } \boxed{-2 + x}$$

$$14) 7 = -y + 3x$$

$$\begin{array}{r} -3x \quad -3x \\ 7 = -y + 3x \end{array}$$

$$\begin{array}{r} 7 - 3x = -y \\ -1 \quad -1 \end{array}$$

$$\boxed{\frac{7 - 3x}{-1} = y} \quad \text{or} \quad \boxed{-7 + 3x = y}$$

- 15) The formula for the perimeter of a rectangle is $P = 2w + 2l$. Solve the formula for the width w .

$$\begin{array}{r} P = 2w + 2l \\ -2l \quad \quad -2l \end{array}$$

$$\frac{P-2l}{2} = \frac{2w}{2}$$

$$\boxed{\frac{P-2l}{2} = w}$$

- 16) The formula for the volume of a prism is $V = Bh$.

- a) Solve the formula for the height h .

$$\frac{V}{B} = \frac{Bh}{B}$$

$$\frac{V}{B} = h$$

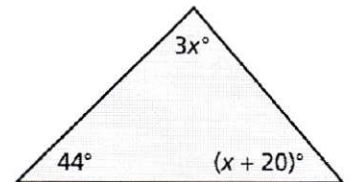
- b) What is the height of a prism if the volume (V) of the prism is 120 cubic feet and the base area (B) is 15 square feet?

$$h = \frac{V}{B}$$

$$h = \frac{120}{15}$$

$$\boxed{h = 8 \text{ feet}}$$

- 17) The sum of the measures of the interior angles of the triangle is 180° . Write and solve an equation to find the value of the variable. Afterwards, find the measure of them missing angles.



- a) Equation: $3x + x + 20 + 44 = 180$

$$4x + 64 = 180$$

$$\begin{array}{r} -64 \quad \quad -64 \end{array}$$

$$\frac{4x}{4} = \frac{116}{4}$$

$$x = 29$$

- b) Solution: $x = 29$

$$3x = 87^\circ \quad x+20 = 49^\circ$$