

$$\begin{array}{l}
 x - 12 = -21 \quad \checkmark \quad -9 - 12 = -21 \\
 +12 \quad +12 \quad \quad \quad -21 = -21 \\
 x = -9
 \end{array}$$

$$\begin{array}{l}
 3a = -27 \quad \checkmark \quad 3(-9) = -27 \\
 \quad \quad \quad \quad \quad \quad \quad -27 = -27 \\
 a = -9
 \end{array}$$

$$\begin{array}{l}
 z + 15 = -32 \quad \checkmark \quad -47 + 15 = -32 \\
 -15 \quad -15 \quad \quad \quad -32 = -32 \\
 z = -47
 \end{array}$$

$$\begin{array}{l}
 \frac{6}{1}x = 3(6) \text{ OR } \frac{x}{6} = \frac{3}{1} \\
 18 = x
 \end{array}$$

$$\frac{x}{6} = 18$$

$$\boxed{x = 18}$$

proportions
 - cross multiplication

$$\frac{2(3x+4)}{6} = \frac{x+7}{2}$$

$$\frac{6x+8}{6} = \frac{x+7}{2}$$

$$\frac{1 \cdot 3}{2 \cdot 4}$$

$$6(x+7) = 2(6x+8)$$

$$\cancel{6x} + 42 = 12x + 16$$
$$\cancel{6x} \qquad \qquad \qquad -6x$$

$$42 = 6x + 16$$
$$-16 \qquad \qquad \qquad -16$$

$$\frac{26}{6} = \frac{6x}{6}$$

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

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

$$\left(\frac{4}{3}\right)^3 y = \frac{4}{1} \left(\frac{4}{3}\right)$$

~~$$\frac{4}{1} \cdot \frac{4}{3} = \frac{16}{3}$$~~

$$\boxed{5\frac{1}{3}}$$

~~$$\frac{12}{12} y = \frac{16}{3}$$~~

$$y = 5\frac{1}{3}$$