

Name: _____

Date: _____

6.2B Worksheet

Solve each equation. Show all work.

1) $\frac{m}{8} = \frac{1}{4}$

$$\frac{4m}{4} = \frac{8}{4}$$

$$m = 2$$

2) $\frac{-5}{6} = \frac{15}{x}$

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

$$x = -18$$

3) $-\frac{9}{y} = \frac{27}{-12}$

$$\frac{-9}{y} = \frac{-27}{12}$$

$$\frac{-27y}{-27} = \frac{-108}{-27}$$

$$y = 4$$

4) $\frac{(w+1)}{3} = \frac{(w-1)}{5}$

$$5(w+1) = 3(w-1)$$

$$5w+5 = 3w-3$$

$$-3w \quad -3w$$

$$2w = -8$$

$$\frac{2w}{2} = \frac{-8}{2}$$

$$w = -4$$

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

$$4(2n-3) = 2(-n-1)$$

$$8n-12 = -2n-2$$

$$+2n \quad +2n$$

$$10n-12 = -2 \quad \parallel \quad \frac{10n}{10} = \frac{10}{10}$$

$$+12 \quad +12$$

$$n = 1$$

6) $\frac{x}{4} = \frac{x}{5} + 1$

$$20 \frac{x}{4} = 20 \frac{x}{5} + 1(20)$$

$$5x = 4x + 20$$

$$-4x \quad -4x$$

$$x = 20$$

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

$$24 \left(\frac{x}{6} \right) + 24 \left(\frac{x}{8} \right) = 7(24)$$

$$4x + 3x = 168$$

$$\frac{7x}{7} = \frac{168}{7}$$

$$x = 24$$

$$8) \frac{15(x+1)}{3} + \frac{15(x+5)}{5} = 4(15)$$

$$5(x+1) + 3(x+5) = 60$$

$$5x + 5 + 3x + 15 = 60$$

$$8x + 20 = 60$$

$$\begin{array}{r} -20 \\ -20 \end{array}$$

$$\frac{8x}{8} = \frac{40}{8}$$

$$x = 5$$

$$10) \frac{6(4m+5)}{3} - \frac{4(3m)}{2} = -m(6)$$

$$2(4m+5) - 3(3m) = -6m$$

$$8m + 10 - 9m = -6m$$

$$\begin{array}{r} -m + 10 = -6m \\ +m \qquad \qquad +m \end{array}$$

$$\frac{10}{-5} = \frac{-5m}{-5}$$

$$m = -2$$

$$9) \frac{6(y+1)}{2} - \frac{6(y-7)}{6} = 3(6)$$

$$3(y+1) - 1(y-7) = 18$$

$$3y + 3 - y + 7 = 18$$

$$2y + 10 = 18$$

$$\begin{array}{r} -10 \\ -10 \end{array}$$

$$\frac{2y}{2} = \frac{8}{2}$$

$$y = 4$$