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$$a) \quad \frac{x}{2} = \frac{x+6}{4} \quad || \cdot 4$$

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

$$2x = x + 6 \quad || -x$$

$$x = 6$$

$$b) \quad \frac{3x-2}{8} = \frac{x+1}{4} \quad || \cdot 8$$

$$\frac{8(3x-2)}{8} = \frac{8(x+1)}{4}$$

$$3x-2 = 2(x+1)$$

$$3x-2 = 2x+2 \quad || -2x$$

$$x-2 = 2 \quad || +2$$

$$x = 4$$

$$c) \quad \frac{y+3}{2} = \frac{4y}{6} \quad || \cdot 6$$

$$\frac{6(y+3)}{2} = \frac{6 \cdot 4y}{6}$$

$$3(y+3) = 4y$$

$$3y+9 = 4y \quad || -3y$$

$$9 = y$$

$$y = 9$$

$$d) \frac{2y+3}{5} = \frac{4-y}{10} \quad || \cdot 10$$

$$\frac{\overset{2 \cdot}{\cancel{10}} (2y+3)}{\cancel{5}} = \frac{\overset{1 \cdot}{\cancel{10}} (4-y)}{\cancel{10}}$$

$$2(2y+3) = 4-y$$

$$\cancel{4}^{\overset{5y}{y}} + 6 = 4 - \cancel{y}^{\overset{0}{y}} \quad || +y$$

$$5y + \cancel{6}^{\overset{0}{6}} = \cancel{4}^{\overset{-2}{4}} \quad || -6$$

$$\frac{5y}{5} = \frac{-2}{5} \quad || :5$$

$$y = -\frac{2}{5} \quad (= -0,4)$$

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$$a) \frac{x-1}{3} = \frac{2x}{7} \quad || \cdot 21$$

$$\frac{\overset{7 \cdot}{\cancel{21}} (x-1)}{\cancel{3}} = \frac{\overset{3 \cdot}{\cancel{21}} \cdot 2x}{\cancel{7}}$$

$$7(x-1) = 3 \cdot 2x$$

$$\cancel{7}^{\overset{x}{x}} - 7 = \cancel{6}^{\overset{0}{6}} x \quad || -6x$$

$$x - \cancel{7}^{\overset{0}{7}} = \cancel{0}^{\overset{7}{7}} \quad || +7$$

$$x = 7$$

$$b) \frac{4x-1}{3} = \frac{3x-2}{2} \quad || \cdot 6$$

$$\frac{6(4x-1)}{3} = \frac{6(3x-2)}{2}$$

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

$$\cancel{8x} - 2 = \cancel{9x} - 6 \quad \parallel -9x$$

$$-x - 2 = -6 \quad \parallel +2$$

$$\frac{-x}{-1} = \frac{-4}{-1} \quad \parallel :(-1)$$

$$x = 4$$

$$c) \quad \frac{5x-4}{5} = \frac{2x+7}{2} \quad \parallel \cdot 10$$

$$\frac{10(5x-4)}{5} = \frac{10(2x+7)}{2}$$

$$2(5x-4) = 5(2x+7)$$

$$\cancel{10x} - 8 = \cancel{10x} + 35 \quad \parallel -10x$$

$$-8 = 35$$

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$$d) \quad \frac{x+5}{3} = \frac{x+11}{5} \quad \parallel \cdot 15$$

$$\frac{15(x+5)}{3} = \frac{15(x+11)}{5}$$

$$5(x+5) = 3(x+11)$$

$$\cancel{5x} + 25 = \cancel{3x} + 33 \quad \parallel -3x$$

$$2x + 25 = 33 \quad \parallel -25$$

$$\frac{2x}{2} = \frac{8}{2} \quad \parallel :2$$

$$x = 4$$

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