

Page 75

$$11a) x - 5(x-2) = 6x$$

$$x - 5x + 10 = 6x$$

$$x - 5x - 6x = -10$$

$$-10x = -10$$

$$x = \frac{-10}{-10} = 1$$

$$\boxed{x = 1}$$

11b)

$$120 = 2x - (15 - 7x)$$

$$120 = 2x - 15 + 7x$$

$$120 + 15 = 2x + 7x$$

$$135 = 9x$$

$$x = \frac{135}{9} = 15$$

$$\boxed{x = 15}$$

$$12a) \frac{x+2}{2} = \frac{x+3}{3} \quad // \quad \frac{3(x+2)}{\cancel{6}} = \frac{2(x+3)}{\cancel{6}} \quad //$$

$$3(x+2) = 2(x+3) \quad // \quad 3x+6 = 2x+6 \quad //$$

$$3x - 2x = 6 - 6$$

$$\boxed{x = 0}$$

$$12b) \frac{x}{2} - \frac{2x+7}{5} = 5 \quad // \quad \frac{5x}{\cancel{10}} - \frac{2(2x+7)}{\cancel{10}} = \frac{50}{\cancel{10}}$$

$$5x - 2(2x+7) = 50 \quad // \quad 5x - 4x - 14 = 50 \quad //$$

$$x = 50 + 14 = 64$$

$$\boxed{x = 64}$$

$$12c) \frac{x}{4} + 5 = \frac{7x}{12} \quad // \quad \frac{3x}{\cancel{12}} + \frac{12 \cdot 5}{\cancel{12}} = \frac{7x}{\cancel{12}} \quad //$$

$$3x + 60 = 7x \quad // \quad 7x - 3x = 60 \quad // \quad 4x = 60 \quad // \quad x = \frac{60}{4} = 15$$

$$\boxed{x = 15}$$

$$13a) \frac{4(x-1)}{3} - \frac{2(x-3)}{6} = 5$$

$$\frac{\cancel{2} \cdot 4(x-1)}{\cancel{6}} - \frac{2(x-3)}{\cancel{6}} = \frac{5 \cdot 6}{\cancel{6}}$$

$$8(x-1) - 2(x-3) = 30 \quad // \quad 8x - 8 - 2x + 6 = 30 \quad //$$

$$8x - 2x = 30 + 8 - 6 \quad // \quad 6x = 32 \quad // \quad x = \frac{32}{6} = \frac{16}{3}$$

$$\boxed{x = \frac{16}{3}}$$

Pag 75

171111 (3)

$$13b) 2x + \frac{(x+5)}{6} - \frac{3(x+4)}{8} = 7 - 3x$$

$$\frac{24 \cdot 2x}{\cancel{24}} + \frac{4(x+5)}{\cancel{24}} - \frac{3 \cdot 3(x+4)}{\cancel{24}} = \frac{24(7-3x)}{\cancel{24}}$$

$$48x + 4x + 20 - 9x - 36 = 168 - 72x$$

$$48x + 4x - 9x + 72x = 168 + 36 - 20$$

$$115x = 184$$

$$x = \frac{184}{115} = \frac{2 \cdot 2 \cdot 2 \cdot \cancel{23}}{5 \cdot \cancel{23}} = \frac{8}{5}$$

$$\boxed{x = \frac{8}{5}}$$