

S1 HW 18A

1) 1135 → 1315

$$\begin{array}{ccccccc} 1135 & & 1235 & & 1300 & & 1315 \\ \hline & \xrightarrow{1 \text{ hr}} & & \xrightarrow{25 \text{ m} + 15 \text{ m}} & & & \\ & & & & & & \end{array}$$

= 1 hr 40 mins

2) a) $0.5 \text{ hr} = 30 \text{ min}$

$$\xrightarrow{\times 60}$$

b) $2.75 \text{ hr} = 2 \text{ hr } 45 \text{ min}$

$$\xrightarrow{\times 60}$$

c) $6.1 \text{ hr} = 6 \text{ hr } 6 \text{ min}$

$$\xrightarrow{\times 60}$$

d) $3.3 \text{ hr} = 3 \text{ hr } 18 \text{ min}$

$$\xrightarrow{\times 60}$$

3) a) $D = S \times T$

$$= 36 \times 5$$

$$= 180 \text{ miles}$$

b) $T = \frac{D}{S}$

$$= \frac{300}{120}$$

$$= 2.5 \text{ hrs}$$

$$= 2 \text{ hr } 30 \text{ min}$$

c) $S = \frac{D}{T}$ $T = 7.25 \text{ hr}$

$$= 7.25$$

$$= \frac{522}{7.25}$$

$$= 72 \text{ mph}$$

4) a) $5x + 7 = 32$

$$5x = 25$$

$$x = 5$$

b) $6x - 3 = 15$

$$6x = 18$$

$$x = 3$$

c) $10 = 3x + 1$

$$9 = 3x$$

$$x = 3$$

5) a) $\frac{7c}{2} = 21$

$$7c = 42$$

$$c = 6$$

b) $\frac{3b}{4} = 45$

$$3b = 180$$

$$b = 60$$

6) a) $3(3a + 4) = 21$

$$9a + 12 = 21$$

$$9a = 9$$

$$a = 1$$

b) $2(2v - 7) = 7$

$$4v - 14 = 7$$

$$4v = 21$$

$$v = \frac{21}{4} \text{ or } 5.25$$

$$7) \quad a) \quad 14f - 8 + 24 - 6f = 36$$

$$8f + 16 = 36$$

$$8f = 20$$

$$f = \frac{20}{8} = \frac{5}{2}$$

$$b) \quad 7x + 6 - 5x + 2 = 11$$

$$2x + 8 = 11$$

$$2x = 3$$

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

$$8) \quad a) \quad 3p - 6 = p + 14$$

$$2p - 6 = 14$$

$$2p = 20$$

$$p = 10$$

$$b) \quad 5p + 2 = 3 + 2p$$

$$3p + 2 = 3$$

$$3p = 1$$

$$p = \frac{1}{3}$$

$$9) \quad a) \quad 2(x+2) + 3(x+4) = 31$$

$$2x + 4 + 3x + 12 = 31$$

$$5x + 16 = 31$$

$$5x = 15$$

$$x = 3$$

$$b) \quad 4(x+2) - 2(x-4) = 40$$

$$4x + 8 - 2x + 8 = 40$$

$$2x + 16 = 40$$

$$2x = 24$$

$$x = 12$$

$$c) \quad \frac{4t}{6} + 7 = 9$$

$$\frac{4t}{6} = 2$$

$$4t = 12$$

$$t = 3$$

$$d) \quad 4(5a+2) = 9(2a+2)$$

$$20a + 8 = 18a + 18$$

$$2a + 8 = 18$$

$$2a = 10$$

$$a = 5$$