1) B 2) D 3) A 4) D 5) A

6) Hire Purchase Price
= Deposit + 12 monthly installments
= $1120 + 12($168)
= $3136

Savings = Hire Purchase Price - Cash Price
= $3136 - $2800
= $336

7)a) Overtime = 8 x $5·00 x 2
= $80·00

b) Basic week = $5·00 x 40
= $200

Overtime Pay = $320 - $200
= $120

Number of overtime hours = $\frac{\$120}{\$5.00 \times 2}$

= 12 hours

8) a) $0.005369 = 5.369 \times 10^{-3}$

b) $565.07 = 5.6507 \times 10^{2}$

c) $0.04 \times 3.5 = 0.14$

$= 1.4 \times 10^{-1}$

9) a) $\frac{p^3 q}{p^2} = \frac{p \times p \times p \times q}{p \times p}$

$= pq$

b) $\frac{7m}{5n} \overset{\times 3x}{} + \frac{5t}{3x} \overset{\times 5n}{}$

$\frac{21mx}{15nx} + \frac{25nt}{15nx}$

$= \frac{21mx + 25nt}{15nx}$

c) $5x - 3(x - 2)$

$= 5x - 3x + 6$

$= 2x + 6$

10) a) $4(y-3)+2(y+1)=0$

$4y-12+2y+2=0$

$6y-10=0$

$6y=10$

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

b) $\frac{5x+2}{5}-\frac{5-2x}{3}=0 \quad \times 15$

$3(5x+2)-5(5-2x)=0$

$15x+6-25+10x=0$

$25x-19=0$

$25x=19$

$x=\frac{19}{25}$

11) a) $K=\frac{1}{2}mx \quad \times 2$

$2K=mx \quad \div m$

$\frac{2K}{m}=x$

b) $\frac{3}{x}+5=17$

$\frac{3}{x}=12 \quad \times x$

$3=12x \quad \div 12$

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

12) AD : AB = 1 : 3 scale factor of lengths

∴ scale factor of areas is $1^2 : 3^2$

$1 : 9$

Area of ADE $= \frac{54}{9} = 6\ cm^2$

Area of BCED $= 54 - 6$

$= 48\ cm^2$

13) a) $10h^2 - 5h = 5h(2h - 1)$

b) $25x^2 - 5x = 5x(5x - 1)$

c) $18xy^2 - 21x^2y = 3xy(6y - 7x)$

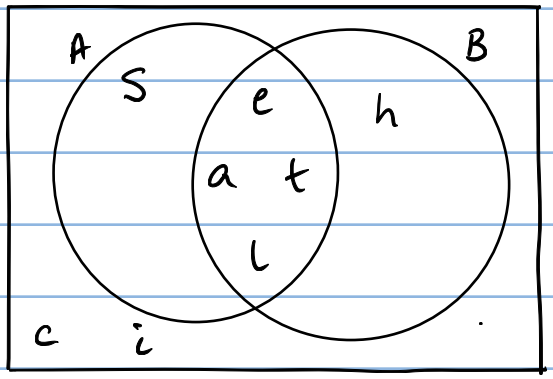
14) Exterior angle $= 180^\circ - 120^\circ$

$= 60^\circ$

Number of sides $= \frac{360^\circ}{60^\circ}$

$= 6$

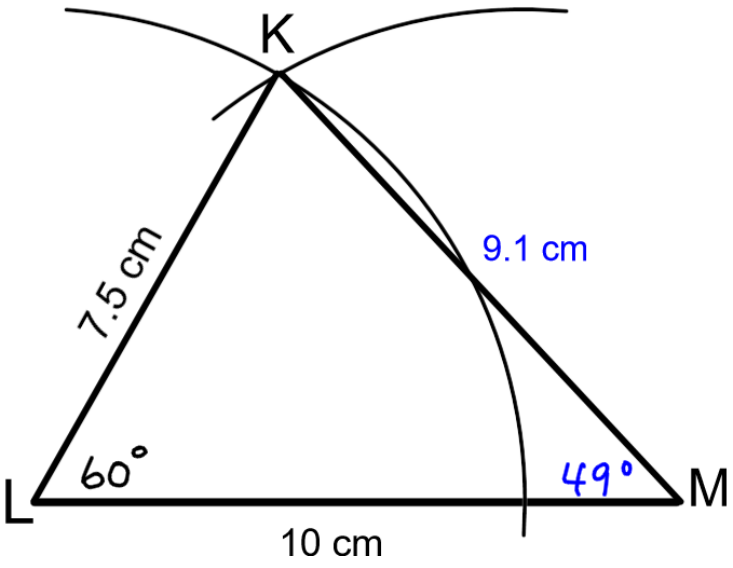
15) b) Drawing the Venn diagram first makes answering part a easier



a)i) $A' \cap B = \{h\}$

ii) $A \cup B' = \{s, e, a, t, l, i, c\}$

16)



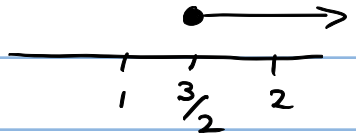
17)i) $3x + (x+1) \geq 7$

$4x + 1 \geq 7$

$4x \geq 6$

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

ii)



18) Volume $= \pi r^2 h$

$= \frac{22}{7} \times 14^2 \times 6$

$= 3696\ cm^3$