1) $B$
2) $D$
3) $A$
4) $D$
5) $A$
6) Hire Purchase Price

$$
\begin{aligned}
& =\text { Deposit }+12 \text { monthly installments } \\
& =\$ 1120+12(\$ 168) \\
& =\$ 3136
\end{aligned}
$$

$$
\begin{aligned}
\text { Savings } & =\text { Hire Purchase Price - Cash Price } \\
& =\$ 3136-\$ 2800 \\
& =\$ 336
\end{aligned}
$$

$$
\text { 7) } \begin{aligned}
\text { Overtime } & =8 \times \$ 5.00 \times 2 \\
& =\$ 80.00
\end{aligned}
$$

b)

$$
\begin{aligned}
\text { Basic week } & =\$ 5.00 \times 40 \\
& =\$ 200 \\
\text { Overtime Pay } & =\$ 320-\$ 200 \\
& =\$ 120 \\
\text { Number of overtime hours } & =\frac{\$ 120}{\$ 5.00 \times 2} \\
& =12 \text { hours }
\end{aligned}
$$

8) at $0.005369=5.369 \times 10^{-3}$
b) $565.07=5.6507 \times 10^{2}$
c)

$$
\begin{aligned}
0.04 \times 3.5 & =0.14 \\
& =1.4 \times 10^{-1}
\end{aligned}
$$

9) a)

$$
\begin{aligned}
\frac{p^{3} q}{p^{2}} & =\frac{p \times p \times p \times q}{p \times p} \\
& =p q
\end{aligned}
$$

b)

$$
\begin{aligned}
& \frac{7 m^{\times 3 x}}{5 n \times 3 x}+\frac{5 t^{5 n}}{3 x} \times 5 n \\
& \frac{21 m x}{15 n x}+\frac{25 n t}{15 n x} \\
& =\frac{21 m x+25 n t}{15 n x}
\end{aligned}
$$

c)

$$
\begin{aligned}
& 5 x-3(x-2) \\
& =5 x-3 x+6 \\
& =2 x+6
\end{aligned}
$$

10) a)

$$
\begin{gathered}
4(y-3)+2(y+1)=0 \\
4 y-12+2 y+2=0 \\
6 y-10=0 \\
6 y=10 \\
y=\frac{5}{3}
\end{gathered}
$$

b)

$$
\begin{gathered}
\frac{5 x+2}{5}-\frac{5-2 x}{3}=0 \quad \times 15 \\
3(5 x+2)-5(5-2 x)=0 \\
15 x+6-25+10 x=0 \\
25 x-19=0 \\
25 x=19 \\
x=\frac{19}{25}
\end{gathered}
$$

11) a)

$$
\begin{aligned}
& k=\frac{1}{2} m x \quad \times 2 \\
& 2 k=m x \quad \div m \\
& \frac{2 k}{m}=x
\end{aligned}
$$

b)

$$
\begin{aligned}
\frac{3}{x}+5 & =17 \\
\frac{3}{x} & =12 \quad \times x \\
3 & =12 x \\
\frac{1}{4} & =x
\end{aligned}
$$

12) $A D: A B=1: 3$ scale factor of lengths
$\therefore$ scale factor of areas is $1^{2}: 3^{2}$

$$
1: 9
$$

Area of $A D E=\frac{54}{9}=6 \mathrm{~cm}^{2}$
Area of $B C E D=54-6$

$$
=48 \mathrm{~cm}^{2}
$$

(3) a) $10 h^{2}-5 h=5 h(2 h-1)$
b) $25 x^{2}-5 x=5 x(5 x-1)$
c) $18 x y^{2}-21 x^{2} y=3 x y(6 y-7 x)$
14)

$$
\begin{aligned}
\text { Exterior angle } & =180^{\circ}-120^{\circ} \\
& =60^{\circ} \\
\text { Number of sides } & =\frac{360^{\circ}}{60^{\circ}} \\
& =6
\end{aligned}
$$

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

a)i) $A^{\prime} \cap B=\{h\}$
ii) $A \cup B^{\prime}=\{s, e, a, t, l, i, c\}$
16) 


17)i)

$$
\begin{array}{r}
3 x+(x+1) \geqslant 7 \\
4 x+1 \geqslant 7 \\
4 x \geqslant 6 \\
x \geqslant \frac{3}{2}
\end{array}
$$

ii)

18)

$$
\begin{aligned}
\text { Volume } & =\pi r^{2} h \\
& =\frac{22}{7} x^{14^{2}} \times 6 \\
& =3696 \mathrm{~cm}^{3}
\end{aligned}
$$

