1) Expand $(x-3)^{2}(x+4)$
2) $\quad r$ is directly proportional to $s$. When $r=60, s=5$.

Find the value of $r$ when $s=3$
3) Simplify $\frac{x^{2}+7 x+6}{7 x-2-6 x+3}$
4) If $f(x)=7-2 x^{2}$, find the value of $f(3)$
5) Find the coordinates of the vertex of the graph
$y=x^{2}-8 x-5$

1) Find the equation of the line parallel to $2 y+4 x=7$ passing through the point ( 4,1 )
2) Simplify $\frac{2 x+3}{3}+\frac{2 x-5}{4}$
3) Sketch the graph of $y=-x^{2}$
4) A block has a volume of $20 \mathrm{~cm}^{3}$, and a density of $4.5 \mathrm{~g} / \mathrm{cm}^{3}$. Calculate its mass
5) Rationalise the denominator

$$
\frac{6 \sqrt{3}}{\sqrt{3}-2}
$$

1) Expand $(x+3)^{3}$
2) $\quad r$ is directly proportional to $s$. When $r=40, s=5$.

Find the value of $r$ when $s=7$
3) Simplify $\frac{x^{2}+7 x+12}{2(x+3)-(x+2)}$
4) If $f(x)=3+2 x^{2}$, find the value of $f(-3)$
5) Find the coordinates of the vertex of the graph
$y=x^{2}+10 x+12$

1) Find the equation of the line parallel to $2 y-6 x=7$ passing through the point ( $-2,7$ )
2) Simplify $\frac{3 x+2}{4}-\frac{2 x-3}{6}$
3) Sketch the graph of $y=x^{2}+4$
4) A block has a mass of 20 g , and a density of $4 \mathrm{~g} / \mathrm{cm}^{3}$. Calculate its volume
5) Rationalise the denominator

$$
\frac{2 \sqrt{5}}{\sqrt{5}+2}
$$

1) Expand $(x+3)(x-2)^{2}$
2) $\quad a$ is directly proportional to $b$. When $a=5, b=10$. Find the value of $b$ when $a=7$
3) Simplify $\frac{x^{2}-25}{x+5}$
4) If $f(x)=3-2 x^{2}$, find the value of $f(-5)$
5) Find the coordinates of the vertex of the graph
$y=x^{2}-6 x+12$
6) Find the equation of the line parallel to $3 y+6 x=5$ passing through the point ( $4,-3$ )
7) Simplify $\frac{2 x-5}{3}-\frac{2 x-4}{6}$
8) Sketch the graph of $y=x^{3}$
9) A pressure of $24 \mathrm{~N} / \mathrm{m}^{2}$ results from a force of 12 N acting over an area $x \mathrm{~m}^{2}$. Find $x$
10) Rationalise the denominator

$$
\frac{6 \sqrt{7}}{\sqrt{7}-1}
$$

