Factorising Algebraic Expressions
We have expanded $2(3 x-4)$
to give $6 x-8$
Factorising is the opposite of this process

$$
6 x-8=2(3 x-4)
$$

Examples
1)

$$
\begin{aligned}
& 14 x-12 y+4 z \\
= & 2(7 x-6 y+2 z)
\end{aligned}
$$

2) 

$$
\begin{array}{r}
8 x-4 y \\
=4(2 x-y)
\end{array}
$$

$2(4 x-2 y)$ would not be fully factorised
3)

$$
\begin{aligned}
& x^{2}-5 x \\
= & x(x-5)
\end{aligned}
$$

4) 

$$
\begin{aligned}
& y^{2}+y \\
= & y(y+1)
\end{aligned}
$$

5) 

$$
\begin{aligned}
& x^{3} y+x y^{2} \\
& x y\left(x^{2}+y\right)
\end{aligned}
$$

6) 

$$
\begin{aligned}
& 6 x^{2} p^{3} r^{4}-4 x^{3} p^{3} r^{3}+8 x^{2} p^{4} r^{2} \\
& 2 x^{2} p^{3} r^{2}\left(3 r^{2}-2 x r+4 p\right)
\end{aligned}
$$

