Factoring formulas

$$
\begin{aligned}
x^2 - a^2 &= (x - a) \cdot (x + a) \\
x^2 + 2ax + a^2 &= (x + a)^2 \\
x^2 - 2ax + a^2 &= (x - a)^2 \\
x^2 + (a + b)x + ab &= (x + a)(x + b) \\
x^3 \pm a^3 &= (x \pm a)(x^2 \mp ax + a^2) \\
x^3 + 3ax^2 + 3a^2 + a3 &= (x + a)^3 \\
x^3 - 3ax^2 + 3a^2 - a3 &= (x - a)^3
\end{aligned}
$$

Examples