



Completing the Square

If a quadratic expression can be written as a single bracket squared, it is called a **perfect square**.

 **Example** $x^2 + 4x + 4 = (x + 2)(x + 2) = (x + 2)^2$

Most quadratic expressions can't be written like this. **Completing the square** fits the expression to the closest perfect square with an amount added or subtracted.

 **Example** $x^2 + 4x + 7 = (x + 2)^2 + 3$

