

## Forme canonique

SAI.Fethi

$$ax^2 + bx + c = a\left(x + \frac{b}{2a}\right)^2 - \frac{\Delta}{4a} \quad (a \neq 0).$$

Preuve :

$$a \times \left(x + \frac{b}{2a}\right)^2 - \frac{\Delta}{4a} = a \times \left(x + \frac{b}{2a}\right)^2 - \frac{b^2 - 4 \times a \times c}{4a}$$

$$a \times \left(x + \frac{b}{2a}\right)^2 - \frac{\Delta}{4a} = a \times \left(x^2 + \frac{b^2}{4a^2} + 2 \times \frac{b}{2a} \times x\right)^2 - \frac{b^2 - 4 \times a \times c}{4a}$$

$$a \times \left(x + \frac{b}{2a}\right)^2 - \frac{\Delta}{4a} = a \times x^2 + \frac{b^2}{4a} + \frac{a \times b}{a} \times x - \frac{b^2}{4a} + \frac{4 \times a \times c}{4a}$$

$$a \times \left(x + \frac{b}{2a}\right)^2 - \frac{\Delta}{4a} = a \times x^2 + b \times x + c.$$