

This example is from MathMode.pdf of Herbert Voß

$$y = 2x^2 - 3x + 5$$
$$= 2 \left(\underbrace{x^2 - \frac{3}{2}x + \left(\frac{3}{4}\right)^2}_{=0} - \left(\frac{3}{4}\right)^2 + \frac{5}{2} \right)$$

$2x^2 - 3x$ is the beginning of an algebraic identity (binomial formula)

$$= 2 \left(\left(x - \frac{3}{4}\right)^2 + \frac{31}{16} \right)$$

$(a - b)^2 = a^2 - 2ab + b^2$

$$y = 2 \left(x - \frac{3}{4}\right)^2 + \frac{31}{8}$$

after simplification, the result is