

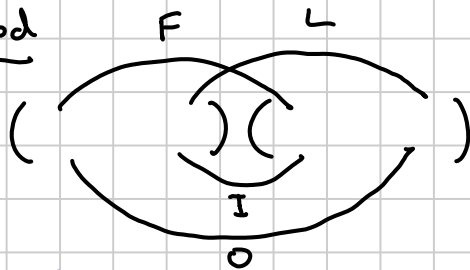
# MULTIPLYING TWO BRACKETS

## First method

$$\begin{aligned} \textcircled{1} \quad & (3x + 2)(2x - 5) \\ &= 3x(2x - 5) + 2(2x - 5) \\ &= 6x^2 - 15x + 4x - 10 \\ &= 6x^2 - 11x - 10 \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & (2x - 3)(x^2 + 5x - 4) \\ &= 2x(x^2 + 5x - 4) - 3(x^2 + 5x - 4) \\ &= 2x^3 + 10x^2 - 8x - 3x^2 - 15x + 12 \\ &= 2x^3 + 7x^2 - 23x + 12 \end{aligned}$$

## Second Method



FOIL or FACE

$$\begin{aligned} \textcircled{1} \quad & (4x - 3)(2x + 7) = 8x^2 + 28x - 6x - 21 \\ &= 8x^2 + 22x - 21 \end{aligned}$$

$$\begin{aligned} \textcircled{2} \quad & (2x - 3)^2 = (2x - 3)(2x - 3) \\ &= 4x^2 - 6x - 6x + 9 \\ &= 4x^2 - 12x + 9 \end{aligned}$$

$$\begin{aligned} \textcircled{3} \quad & (2x + 3)(2x - 3) = 4x^2 - 6x + 6x - 9 \\ &= 4x^2 - 9 \end{aligned}$$

$$\begin{aligned} \textcircled{4} \quad & (x + 3)^2 - (x + 4)(x + 2) \\ &= (x + 3)(x + 3) - (x + 4)(x + 2) \\ &= x^2 + 3x + 3x + 9 - [x^2 + 2x + 4x + 8] \\ &= x^2 + 6x + 9 - x^2 - 6x - 8 \\ &= \underline{\underline{1}} \end{aligned}$$