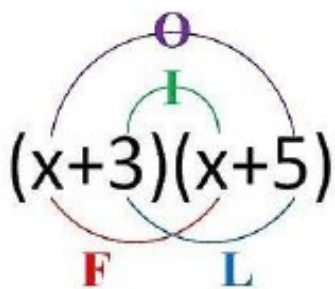


FOIL



$$\begin{array}{cccc}
 F & O & I & L \\
 (x)(x) & (x)(5) & (3)(x) & (3)(5)
 \end{array}$$

F = First
 O = Outside
 I = Inside
 L = Last

$$\begin{aligned} 1) & \quad \overset{F}{\text{---}} \overset{O}{\text{---}} \\ & \quad (x+1)(x+1) \\ & \quad (x)(x) + (x)(1) + 1(x) + (1)(1) \\ & \quad x^2 + 1x + 1x + 1 \\ & \quad \underline{x^2 + 2x + 1} \end{aligned}$$

$$\begin{aligned} (2) & \quad (x+2)(x+3) \\ & \quad (x)(x) + (x)(3) + (2)(x) + 2(3) \\ & \quad x^2 + 3x + 2x + 6 \\ & \quad \underline{x^2 + 5x + 6} \end{aligned}$$

$$3) (x+4)(x+3)$$

$$(x)(x) + (x)(3) + (4)(x) + 4(3)$$

$$x^2 + 3x + 4x + 12$$

$$x^2 + 7x + 12$$

$$4) (x-5)(x-4)$$

$$x^2 - 4x - 5x + 20$$

$$x^2 - 9x + 20$$

$$5) \overbrace{(2x+1)(x+2)}$$

$$(2x)(x) + (2x)(2) + (1)(x) + (1)(2)$$

$$2x^2 + 4x + 1x + 2$$

$$2x^2 + 5x + 2$$

$$6) \overbrace{(2x+1)(2x+1)}$$

$$4x^2 + 2x + 2x + 1$$

$$4x^2 + 4x + 1$$

$$\rightarrow) (2x-1)(x-3)$$

$$2x^2 - 6x - 1x + 3$$

$$2x^2 - 7x + 3$$

$$(8) (3x+y)(3x+y)$$

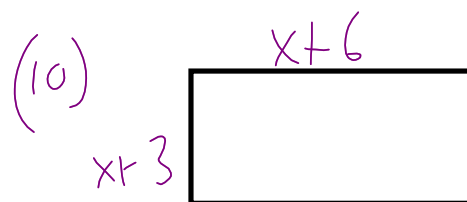
$$9x^2 + 3xy + 3xy + y^2$$

$$9x^2 + 6xy + y^2$$

$$9) (3x - y)(x + 2y)$$

$$3x^2 + 6xy - \cancel{xy} - 2y^2$$

$$3x^2 + 5xy - 2y^2$$



$$A = bh$$

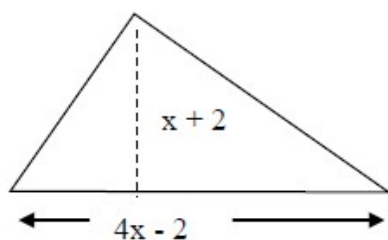
$$A = (x+6)(x+3)$$

$$A = x^2 + 3x + 6x + 18$$

$$A = x^2 + 9x + 18$$

unit s^2

11)



$$A = \frac{1}{2}bh$$

$$A = \frac{1}{2}(4x-2)(x+2)$$

$$\frac{1}{2}(4x^2 + 8x - 2x - 4)$$

$$A = \frac{1}{2}(4x^2 + 6x - 4)$$

$$A = 2x^2 + 3x - 2 \text{ units}^2$$