

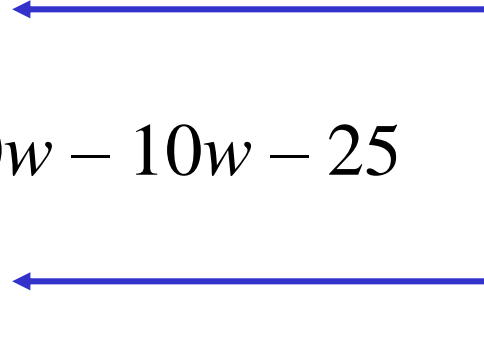
Special Quadratics (difference of squares)

$$(x - 3)(x + 3) = x^2 + 3x - 3x - 9$$

$$= x^2 - 9$$

$$(2w - 5)(2w + 5) = 4w^2 + 10w - 10w - 25$$

$$= 4w^2 - 25$$



Example 1:

What do you notice?

$$x^2 - 25 = (x - 5)(x + 5)$$

$$16a^2 - 81 = (4a - 9)(4a + 9)$$

$$5r^2 - 20 = 5(r^2 - 4) = 5(r - 2)(r + 2)$$

$$2y^2 - 32 = 2(y^2 - 16) = 2(y - 4)(y + 4)$$

Example 2:

$$\begin{aligned} & -36 + b^2 && \text{Difference of squares} \\ & = b^2 - 36 \\ & = (b - 6)(b + 6) \end{aligned}$$

Example 3:

$$2x + 6xy = 2x(1 + 3y)$$