

# Módulo 12 Primer Medio

## Cuadrado de binomio

$$a) (p+q)^2 = p^2 + 2pq + q^2$$

$$b) (2m+3m)^2 = (2m)^2 + 2 \cdot 2m \cdot 3m + (3m)^2 \\ = 4m^2 + 12mm + 9m^2$$

$$c) (x^2+y^3)^2 = (x^2)^2 + 2x^2y^3 + (y^3)^2 \\ = x^4 + 2x^2y^3 + y^6$$

$$d) (10x^3-9x)^2 = (10x^3)^2 - 2 \cdot 10x^3 \cdot 9x + (9x)^2 \\ = 100x^6 - 180x^4 + 81x^2$$

$$e) (3m^3-2m)^2 = (3m^3)^2 - 2 \cdot 3m^3 \cdot 2m + (2m)^2 \\ = 9m^6 - 12m^3m + 4m^2$$

$$f) (0,1x^2-0,1y)^2 = (0,1x^2)^2 - 2 \cdot 0,1x^2 \cdot 0,1y + (0,1y)^2 \\ = 0,01x^4 - 0,02x^2y + 0,01y^2$$

## Suma por diferencia

$$1) (10m+21m)(10m-21m) = 100m^2 - 441m^2$$

$$2) (6w^4+14x^8)(14x^8-6w^4) = 196x^{16} - 36w^8$$

$$3) (h-k)(h+k) = h^2 - k^2$$

$$4) \left(\frac{3}{5}d^6 - \frac{1}{4}f^2\right)\left(\frac{3}{5}d^6 + \frac{1}{4}f^2\right) = \frac{9}{25}d^{12} - \frac{1}{16}f^4$$

$$5) \left(13a^{15} + \frac{2}{7}b^7\right)\left(13a^{15} - \frac{2}{7}b^7\right) = 169a^{30} - \frac{4}{49}b^{14}$$