

$$\text{179} \quad \underline{a^2 - 4a + 4} - 9b^2 =$$

$$= (a-2)^2 - 9b^2 = [(a-2) - 3b][(a-2) + 3b] =$$

$$= (a-2-3b)(a-2+3b)$$

$$\text{182} \quad a^4 + 2a^2b^2 + b^4 - 16 =$$

$$= (a^2 + b^2)^2 - 16 = [(a^2 + b^2) - 4][(a^2 + b^2) + 4] =$$

$$= (a^2 + b^2 - 4)(a^2 + b^2 + 4)$$

$$\text{183} \quad a^6 - a^4 - 2a^3 + 1 =$$

$$= \underline{a^6 - 2a^3 + 1} - a^4 =$$

$$= (a^3 - 1)^2 - a^4 = (a^3 - 1 - a^2)(a^3 - 1 + a^2)$$

$$\text{190} \quad 9x^2 + y^2 - a^2 - 6xy - 8a - 16 =$$

$$= 9x^2 + y^2 - 6xy - (a^2 + 8a + 16) =$$

$$= (3x - y)^2 - (a + 4)^2 =$$

$$= [(3x - y) - (a + 4)] [(3x - y) + (a + 4)] =$$

$$= (3x - y - a - 4)(3x - y + a + 4)$$

$$\text{192} \quad a^6 + b^6 + 2a^3b^3 - x^2 - 2xy - y^2 =$$

$$= (a^3 + b^3)^2 - (x^2 + 2xy + y^2) =$$

$$= (a^3 + b^3)^2 - (x + y)^2 =$$

$$= [(a^3 + b^3) - (x + y)] [(a^3 + b^3) + (x + y)] =$$

$$= (a^3 + b^3 - x - y)(a^3 + b^3 + x + y)$$

$$\text{203} \quad 8x^9 - 36x^6 + 54x^3 - 27 =$$

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

$$\text{195} \quad x^3 - x^2 + \frac{1}{3}x - \frac{1}{27} =$$

$$= \left(x - \frac{1}{3}\right)^3$$

$$\text{215} \quad 4a^2 - 8ac - 4ab + 4c^2 + 4bc + b^2 =$$

$$= (2a - b - 2c)^2$$

$$\text{219} \quad 4a^2 - 4ab - 12a + b^2 + 3b + 9 =$$

↑  
DOVREBBE ESSERE 6b

$$4a^2 - 4ab - 12a + b^2 + 6b + 9 =$$

$$= (2a - b - 3)^2$$

**224** Occhio ai segni. Scomponi i seguenti polinomi, dopo avere raccolto un segno meno:

a.  $-9x^2 - 4y^2 - 1 - 12xy - 6x - 4y$

b.  $-9x^2 - 4y^2 - 1 - 12xy + 6x + 4y$

a)  $-9x^2 - 4y^2 - 1 - 12xy - 6x - 4y =$

$$= - (9x^2 + 4y^2 + 1 + 12xy + 6x + 4y) = - (3x + 2y + 1)^2$$

b)  $-9x^2 - 4y^2 - 1 - 12xy + 6x + 4y =$

$$= - (9x^2 + 4y^2 + 1 + 12xy - 6x - 4y) = - (3x + 2y - 1)^2$$

**251**  $ax^2 + bx^2 - ay^2 - by^2 =$

$$= x^2(a+b) - y^2(a+b) =$$

$$= (a+b)(x^2 - y^2) =$$

$$= (a+b)(x-y)(x+y)$$