ESERCIZI IN PIÙ
LA SCOMPOSIZIONE MEDIANTE RACCOGLIMENTO E DIFFERENZA DI DUE QUADRATI

Scomponi in fattori.

1 $x^4y^4 - 81 + 81x^4 - y^4;$ $3(a + 2b)^2 - 3a^2;$ $(x^2 + a) + 4(3x^2 + 3a)^2.$

2 $6a^2(x + y) - 6a^2(x - y);$ $ax - 2ay + bx - 2by + 2x - 4y;$ $75 - 3(a + 2y)^2.$

3 $a^2x - b^2x + a^2y - b^2y - a^2 + b^2;$ $(3a - x)^3 - 4(3a - x);$ $12(a + b)^3 - 27(a + b)(a - 6b)^2.$

4 $16a^4x - 36b^2x;$ $(a - 3x)^2 + 2(a - 3x)(a + 3x);$ $b^6 - b^4 + 2b^2 - 2.$

5 $(xy + 2)^2 - 4;$ $x^7 - 25x^3y^2;$ $5ax + 25x - 5a - 25.$

6 $6ab - 16ax;$ $2a^3 + 4a^2 - 3a - 6;$ $\left(3a - \dfrac{1}{2}x\right)^2 - 15a + \dfrac{5}{2}x.$

7 $2(a - 1)^2 - 8(x + 3)^2;$ $4a - 4b - ab^2 + b^3;$ $\dfrac{4}{27}x^3 - \dfrac{1}{3}x.$

8 $4a^3 - 4a^2 - 4a + 4;$ $\dfrac{x^4}{5} - \dfrac{16}{5};$ $9b - 18 - (b^2 - 4).$

9 $x^{15} - 16x^7;$ $(2 - x)^2 + 4 - x^2 + (10 - 5x)(2 + x);$ $2b^{12} - 32b^8.$

10 $\dfrac{4}{49}x^3 - \dfrac{16}{25}xy^2;$ $-\dfrac{8}{125}a^2y^5 + \dfrac{16}{25}a^2y^4 + \dfrac{1}{10}y - 1;$ $8a^5b^2 - 12a^5 + 48\,a^3b^2 - 32\,a^3b^4.$

11 $(x - y^2) + 6(2x - 2y^2)^2;$ $\dfrac{3}{5}x^2y - \dfrac{1}{5}xy^2 + \dfrac{3}{2}x^2 - \dfrac{1}{2}xy;$ $a^3 - a^2 - a + 1.$

12 $\left(-\dfrac{3}{2}a + \dfrac{3}{4}b\right)^2 - \left(\dfrac{1}{2}a + \dfrac{1}{4}b\right)^2;$ $27(x + y)^3 - 12(2x - y)^2(x + y);$ $a - 4 - ax^4 + 4x^4.$