

## Operazioni con i polinomi – Prodotti notevoli

Binomial, Trinomial, Perfect Square Trinomials

Les identités remarquables

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1.  $(a + 2b) \cdot (a - 2b) =$
2.  $(a - 2b) \cdot (a - 2b) =$
3.  $(3x + 1)^2 =$  (\*)
4.  $(2x^2 - 3)^2 =$  (\*)
5.  $(y^3 - 2y^2)^2 =$  (\*)
6.  $\left(a^2 + \frac{1}{2}\right)^2 =$  (\*)
7.  $(4x^3 - 1)(4x^3 + 1) =$  (\*)
8.  $(2a^3 + b^2)(2a^3 - b^2) =$  (\*)
9.  $(a - 1)^3 = a^3 - 3a^2 + 3a - 1$
10.  $(a^2 - 1)^3 = a^6 - 3a^4 + 3a^2 - 1$
11.  $(a + b)^2 + (a - b)^2 + (a + b) \cdot (a - b) =$
12.  $(a + b)^2 - (a - b)^2 =$
13.  $(x - 2y)^2 + (x - 3y) \cdot (x + 3y) - (x + 2y) \cdot (x - 3y) =$  (\*\*)
14.  $\left\{4 \cdot [(x - 1)^3 + (x + 1)^2 \cdot (x + 3)] \cdot (x - 1) + 8\right\} \div 8a - (a^2 - 2a) \cdot (a^2 + 2a) =$
15.  $(a^2 - 1) \cdot (a^2 + 1) \cdot (a^2 + 2) - (a^2 - 1)^3 - (2a^2 - 1)^2 =$  (\*\*)
16.  $(x - 1)^2 \cdot (x + 1)^2 - (x^2 - x - 1) \cdot (x^2 + x - 1) =$
17.  $(a + b) \cdot (a - b) - b \cdot (a - 1)(a + 1) + b \cdot (a^2 + b) =$
18.  $4x^2 - (2x + y)^2 + (x + y)^2 - x^2 =$   $-2xy$
19.  $2a^3 - a(a + b) \cdot (a - b) - a \cdot (a - b)^2 =$   $2a^2b$
20.  $-2y^2 - x(x + y) + (x + y + 2z) \cdot (x + y + 2z) - y(x + y) - 2(x + y)^2 - 4z(x + y) =$   $-2x^2 - 4xy$

- 21.**  $-2ab + (a - b)^2 - (a - b)^2 = -2ab$
- 22.**  $(2x^2)^2 + 2(3x^2 - y^2) \cdot (3x^2 + y^2) - 18(x^2 + y^2) \cdot (x^2 - y^2) = 3y^4$
- 23.**  $\left\{ \left[ 2a^2 - \left( a - \frac{1}{2}b \right) \left( a + \frac{1}{2}b \right) \right]^2 - \frac{1}{16}b^4 \right\} - \left[ \frac{1}{2}a^2(2a^2 + b^2) \right]^2 = (**)$
- 24.**  $3b^2 + 2 \left( \frac{1}{2}a + b \right) \cdot \left( \frac{1}{2}a - b \right) - a \left( \frac{1}{2}a + b \right) - \left( \frac{1}{2}a - b \right)^2 + 3 \left( \frac{1}{2}a + b \right) = -\frac{1}{4}a^2 + \frac{3}{2}a + 3b$

(\*) Tratte dal lavoro di Gerard Romo ([www.tomates.com](http://www.tomates.com))

(\*\*) Concessione di [stringher.blog.kataweb.it/](http://stringher.blog.kataweb.it/) - Commissione e-learning IPSSCART B. Stringher – Udine

