

RACCOGLIMENTO TOTALE

1 $18a^3b^2c - 6a^2bcd$

4 $6a^3b - 3ab^3 + 9a^2b^2$

2 $4a^3b + 16a^2b^2$

5 $3ax - 24ax^2 + 9a^2x^2$

3 $3x^4y^2 + 2x^3y - 3xy^3$

6 $28a^4b^3 - 35a^3b^2 - 14a^2b^3 + 7a^2b^2$

RACCOGLIMENTO PARZIALE

7 $6x^2 - 3x + 4xy - 2y$

10 $5xy^2 + 7x + 5y^2 + 7$

8 $ax + bx - ay - by + a + b$

11 $a^3 + a^2 + a + 1$

9 $3ax - 3bx - ay - by$

12 $x^3 - ax^2 + xy + x^2y - ay + y^2$

RICONOSCIMENTO DI PRODOTTI NOTEVOLI: $a^2 - b^2 = (a+b)(a-b)$

13 $a^2 - 1$

16 $25x^4 - 9y^6$

14 $a^2b^2 - 1$

17 $49a^8 - 25b^4$

15 $x^4 - 4y^2$

18 $25x^2 - 16y^2$

RICONOSCIMENTO DI PRODOTTI NOTEVOLI: $a^2 + 2ab + b^2 = (a+b)^2$

19 $4a^2 + 12ab + 9b^2$

22 $9a^4b^4 + 6a^2b^2 + 1$

20 $9a^2 - 30ab + 25b^2$

23 $9a^2 + 64b^2 - 48ab$

21 $16x^4 + \frac{1}{9}y^2 - \frac{8}{3}x^2y$

24 $\frac{1}{25}x^4 + \frac{2}{35}x^2y^3 - \frac{1}{49}y^6$

RICONOSCIMENTO DI PRODOTTI NOTEVOLI: $a^3 + 3a^2b + 3ab^2 + b^3 = (a+b)^3$

25 $x^3 - 3x^2 + 3x + 1$

28 $8a^3 + 36a^2b + 54ab^2 + 27b^3$

26 $a^3 + 3a^2 + 3a + 1$

29 $8x^3 - 12x^2y^2 + 6xy^4 - y^6$

27 $\frac{1}{27}x^6 - \frac{1}{2}x^4y + \frac{9}{4}x^2y^2 - \frac{27}{8}y^3$

30 $\frac{1}{8}x^3 + \frac{3}{16}x^2y + \frac{3}{32}xy^2 + \frac{1}{64}y^3$

RICONOSCIMENTO DI PRODOTTI NOTEVOLI: $a^2 + b^2 + c^2 + 2ab + 2ac + 2bc = (a+b+c)^2$

31 $4x^2 + y^2 + 1 - 4xy + 4x - 2y$

34 $x^2 + y^2 + z^2 - 2xy + 2xz - 2yz$

32 $a^2 + b^2 + 1 + 2ab - 2a - 2b$

35 $a^6 - 2a^4 - 2a^3 + a^2 + 2a + 1$

33 $y^2 + 4x^2 + 4xy - 4y - 8x + 4$

36 $4x^2 + a^2 + 4b^2 - 4ax - 8bx + 4ab$

SOMMA DI DUE CUBI: $a^3 + b^3 = (a+b)(a^2 - ab + b^2)$

37 $x^3 + 1$

40 $a^6 + 1$

38 $27x^3 + 8y^3$

41 $a^6 + b^6$

39 $8x^6 + \frac{1}{27}y^3$

42 $\frac{8}{27}x^3y^6 + z^3$

DIFFERENZA DI DUE CUBI: $a^3 - b^3 = (a-b)(a^2 + ab + b^2)$

43 $x^3 - 8$

46 $8a^3 - 125$

44 $27y^3 - 1$

47 $64x^3y^{12} - z^9$

45 $\frac{1}{8}a^3 - 1$

48 $\frac{1}{27}x^3y^6 - 8z^3$

TRINOMIO PARTICOLARE:

49 $x^2 + 5x - 14$

52 $b^2 - 10b + 21$

50 $x^2 - 7x + 12$

53 $a^2 - 15a + 56$

51 $4y^2 + 3y - 10$

54 $3x^2 + 11x + 6$

ESERCIZI DI RIEPILOGO

1 $4a^5 - 4a - 8a^4 + 8$ $[4(a-2)(a^2+1)(a-1)(a+1)]$

2 $3ax + 3bx + 3cx - 3a^2 - 3ab - 3ac$ $[3(x-a)(a+b+c)]$

3 $a^3 + 3a - 10a$ $[a(a-2)(a+5)]$

4 $7a^4 - 28 + 14a^3 + 28a$ $[7(a^2+2)(a^2-2+2a)]$

5 $\frac{1}{4}x^2y^2z + \frac{25}{4}x^2z - \frac{5}{2}x^2yz$ $\left[\frac{1}{4}x^2z(y-5)^2\right]$

6 $9a^2y^2 - y^2 - 144a^2 + 16$ $[(y-4)(y+4)(3a-1)(3a+1)]$

7 $a^8b^3 + 25a^2b^7 - 10a^5b^5$ $[a^3b^3(a^3-5b^2)^2]$

8 $\frac{4}{25}x^6 - \frac{6}{5}x^3y^2 + \frac{9}{4}y^4$ $\left[\left(\frac{2}{5}x^3 - \frac{3}{2}y^2\right)^2\right]$

9 $27b^3 - 54ab^2 + 36a^2b - 8a^3$ $[(3b-2a)^3]$

10 $\frac{1}{8}a^3b^3x^2 - 27x^2$ $\left[x^2\left(\frac{1}{2}ab-3\right)\left(\frac{1}{4}a^2b^2 + \frac{3}{2}ab+9\right)\right]$

11 $27x^2y^2 + 3x^3y^3 + 81xy + 81$ $[3(3+xy)^3]$

12 $5ax^2y^2 - 45axy^2 + 40ay^2$ $[5ay^2(x-1)(x-8)]$

13 $13a^2 + 13a + 2ab + 2b$ $[(13a+2b)(a+1)]$

14 $a^2 - 4ab + 4b^2 + 9 - 6a + 12b$ $[(a-2b-3)^2]$

15 $x^3 + \frac{27}{8}y^3$ $\left[\left(x + \frac{3}{2}y\right)\left(x^2 - \frac{3}{2}xy + \frac{9}{4}y^2\right)\right]$

16 $5x^3 + 3x^2 - 5x - 3$ $[(x-1)(x+1)(5x+3)]$

17 $x^5 + 9x^4 + 27x^3 + 27x^2$ $[x^2(x+3)^2]$

18 $4a^2x^2 + a^2y^2 - 4a^2xy + a^2z^2 + 4a^2xz - 2a^2yz$ $[a^2(2x-y+z)^2]$

19 $3y^7 - 2y^2 - 3y^6 + 2y - 6y^5 + 4$ $[(3y^5-2)(y+1)(y-2)]$

20 $x^3 - x^2 - 9a^2x + 9a^2$ $[(x-3a)(x+3a)(x-1)]$

21 $27a^3b^3 + b^3$ $[b^3(3a+1)(9a^2-3a+1)]$

22	$8x^3 - 4x^2 - 2x + 1$	$[(2x-1)^2(2x+1)]$
23	$a^7 - 125a$	$[a(a^2-5)(a^4+5a^2+25)]$
24	$9a^5 - 144ab^2$	$[a(a^2-5)(a^4+5a^2+25)]$
25	$64y^6 - 4y^2$	$[4y^2(4y^2+1)(2y+1)(2y-1)]$
26	$6x^4 + 3x^3 - 24x^2y^2 - 12xy^2$	$[3x(2x+1)(x+2y)(x-2y)]$
27	$ax^2 - 4ax + 4a + x^2 - 4x + 4$	$[(a+1)(x-2)^2]$
28	$12a^6 - 3a^2$	$[3a^2(2a^2-1)(2a^2+1)]$
29	$a^6 - a^4 - 9a^2 + 9$	$[(a+1)(a-1)(a^2+3)(a^2-3)]$
30	$a^3 - ab^2 - a^2b + b^3 + 4a^2 - 4b^2$	$[(a+b)(a-b)(a-b+4)]$
31	$a^4 - b^4 + 3a^2 + 3b^2$	$[(a^2+b^2)(a^2-b^2+3)]$
32	$x^6 + x^5 - 16x^2 - 16x$	$[x(x+1)(x+2)(x-2)(x^2+4)]$
33	$3a^6 - 18a^5 + 36a^4 - 24a^3$	$[3a^3(a-2)^3]$
34	$x^2 - 10x + 16$	$[(x-2)(x-8)]$
35	$a^2 + a - b^2 - b$	$[(a-b)(a+b+1)]$

MINIMO COMUNE MULTIPLO

1	$x+1 ; x^2-1$	$[(x-1)(x+1)]$
2	$2x-2y ; x^2-2xy+y^2$	$[2(x-y)^2]$
3	$9-a^2 ; 3a^2+27-18a$	$[3(a-3)^2(a+3)]$
4	$2a^3-2b^3+3a-3b ; 5a^2-5b^2$	$[5(a-b)(a+b)(2a^2+2ab+2b^2+3)]$
5	$ax^2+ay^2 ; 3x^4-3y^4$	$[3a(x^2+y^2)(x-y)(x+y)]$
6	$3x+3y ; 5x^2-5y^2 ; ax+ay$	$[15a(x-y)(x+y)]$
7	$x^2-25 ; ax-5a ; 3x-15$	$[3a(x-5)(x+5)]$
8	$3x+6a ; x^2-4a^2 ; 4x-8a$	$[12(x+2a)(x-2a)]$
9	$4x+12y ; x^3+27y^3 ;$ $2x^3+18xy^2+12x^2y$	$[4x(x+3y)^2(x^2-3xy+9y^2)]$
10	$b^3-9ab^2+27a^2b-27a^3 ; 5b^2-45a^2 ;$ $2b^2-12ab+18a^2$	$[10(b-3a)^3(b+3a)]$
11	$a^2-4a-5 ; 4a^2+8a+4 ; a^2-7a+10$	$[4(a-5)(a-2)(a+1)^2]$
12	$x^4+8x ; x^2+4x+4 ; 3x^3+6x^2-x-2$	$[x(x-2)^2(x^2-2x+4)(3x^2-1)]$
13	$27a^3+b^3 ; 3ax+by+3ay+bx ;$ $9a^2+b^2+6ab$	$[(3a+b)^2(x+y)(9a^2-3ab+b^2)]$
14	$5ab-5a^4b^4 ; 10+10a^4b^4-20a^2b^2 ;$ $1-a^3b^3-3ab+3a^2b^2$	$[10ab(1-ab)^3(1+ab)^2(1+ab+a^2b^2)]$

