

somma per differenza

1	$(3a - 2b)(3a + 2b)$	$9a^2 - 4b^2$
2	$\left(\frac{4}{3}ab^2 - 5c^3\right)\left(\frac{4}{3}ab^2 + 5c^3\right)$	$\frac{16}{9}a^2b^4 - 25c^6$
3	$\left(\frac{1}{2}x + \frac{7}{3}y^2\right)\left(\frac{1}{2}x - \frac{7}{3}y^2\right)$	$\frac{1}{4}x^2 - \frac{49}{9}y^4$
4	$(3abc^2 + 3)(3abc^2 - 3)$	$9a^2b^2c^4 - 9$
5	$\left(\frac{2}{3}m - \frac{4}{5}n^2\right)\left(\frac{2}{3}m + \frac{4}{5}n^2\right)$	$\frac{4}{9}m^2 - \frac{16}{25}n^4$
6	$\left(3xy^2 + \frac{2}{5}x^2\right)\left(3xy^2 - \frac{2}{5}x^2\right)$	$9x^2y^4 - \frac{4}{25}x^4$
7	$\left(1 - \frac{3}{4}a^2b\right)\left(1 + \frac{3}{4}a^2b\right)$	$1 - \frac{9}{16}a^4b^2$
8	$\left(x^2y^3 - \frac{3}{8}m^2n\right)\left(x^2y^3 + \frac{3}{8}m^2n\right)$	$x^4y^6 - \frac{9}{64}m^4n^2$
9	$(x + 2y)(x - 2y)(x^2 + 4y^2)$	$x^4 - 16y^4$
10	$(a + 3b)(a - 3b)(a^2 + 9b^2)$	$a^4 - 81b^4$

quadrato di binomio

11	$(5a + 2b)^2$	$25a^2 + 20ab + 4b^2$
12	$(3xy^2 - x^2)^2$	$9x^2y^4 - 6x^3y^2 + x^4$
13	$\left(2a^2b - \frac{1}{2}ab^2\right)^2$	$4a^4b^2 - 2a^3b^3 + \frac{1}{4}a^2b^4$
14	$\left(-\frac{2}{3}m^2 - \frac{1}{2}mn^2\right)^2$	$\frac{4}{9}m^4 + \frac{2}{3}m^3n^2 + \frac{1}{4}m^2n^4$
15	$\left(-a^2 - \frac{7}{4}b^2\right)^2$	$a^4 + \frac{7}{2}a^2b^2 + \frac{49}{16}b^4$
16	$(-ax^2 + 3x)^2$	$a^2x^4 - 6ax^3 + 9x^2$
17	$(7x^2yz - y^2z)^2$	$49x^4y^2z^2 - 14x^2y^3z^2 + y^4z^2$
18	$\left(\frac{3}{4}a^2b + \frac{1}{4}b^4c\right)^2$	$\frac{9}{16}a^4b^2 + \frac{3}{8}a^2b^5c + \frac{1}{16}b^8c^2$
19	$(-x^m + 3y^n)^2$	$x^{2m} - 6x^my^n + 9y^{2n}$
20	$(2a^{3x+1} - 3b^{y-1})^2$	$4a^{6x+2} - 12a^{3x+1}b^{y-1} + 9b^{2y-2}$

cubo di binomio

21	$(2a + b^2)^3$	$8a^3 + 12a^2b^2 + 6ab^4 + b^6$
22	$(3x - 2)^3$	$27x^3 - 54x^2 + 36x - 8$
23	$(x - 2y)^3$	$x^3 - 6x^2y + 12xy^2 - 8y^3$
24	$\left(-\frac{2}{3}x^2 - xy\right)^3$	$-\frac{8}{27}x^6 - \frac{4}{3}x^5y - 2x^4y^2 - x^3y^3$
25	$\left(\frac{1}{9}a^2b - \frac{1}{2}x^2\right)^3$	$\frac{1}{729}a^6b^3 - \frac{1}{54}a^4b^2x^2 + \frac{1}{12}a^2bx^4 - \frac{1}{8}x^6$
26	$\left(1 - \frac{2}{3}a^2bc\right)^3$	$1 - 2a^2bc + \frac{4}{3}a^4b^2c^2 - \frac{8}{27}a^6b^3c^3$
27	$\left(\frac{1}{2}ab^3 + \frac{4}{3}b^2c\right)^3$	$\frac{1}{8}a^3b^9 + a^2b^8c + \frac{8}{3}ab^7c^2 + \frac{64}{27}b^6c^3$
28	$\left(\frac{1}{3}mn^2 - 3ab^2\right)^3$	$\frac{1}{27}m^3n^6 - ab^2m^2n^4 + 9a^2b^4mn^2 - 27a^3b^6$
29	$\left(\frac{1}{4}ax^2 - \frac{2}{3}xb^2y\right)^3$	$\frac{1}{64}a^3x^6 - \frac{1}{8}a^2b^2x^5y + \frac{1}{3}ab^4x^4y^2 - \frac{8}{27}b^6x^3y^3$
30	$(a^m - 2b^n)^3$	$a^{3m} - 6a^{2m}b^n + 12a^mb^{2n} - 8b^{3n}$

potenza di binomio

31	$(x + 2y)^4$	$x^4 + 8x^3y + 24x^2y^2 + 32xy^3 + 16y^4$
32	$(2x + y)^5$	$32x^5 + 80x^4y + 80x^3y^2 + 40x^2y^3 + 10xy^4 + y^5$
33	$(2a - 3b)^4$	$16a^4 - 96a^3b + 216a^2b^2 - 216ab^3 + 81b^4$
34	$(1 - 2x^2)^6$	$1 - 12x^2 + 60x^4 - 160x^6 + 240x^8 - 192x^{10} + 64x^{12}$
35	$(3a + b^2)^5$	$243a^5 + 405a^4b^2 + 270a^3b^4 + 90a^2b^6 + 15ab^8 + b^{10}$
36	$(-x^2 - 2y)^6$	$x^{12} + 12x^{10}y + 60x^8y^2 + 160x^6y^3 + 240x^4y^4 + 192x^2y^5 + 64y^6$
37	$(-a^3 + 3)^4$	$a^{12} - 12a^9 + 54a^6 - 108a^3 + 81$
38	$(ab + 2c)^4$	$a^4b^4 + 8a^3b^3c + 24a^2b^2c^2 + 32abc^3 + 16c^4$
39	$(a - 2bc)^6$	$a^6 - 12a^5bc + 60a^4b^2c^2 - 160a^3b^3c^3 + 240a^2b^4c^4 + -192ab^5c^5 + +64b^6c^6$

40	$\left(\frac{1}{2}x + y^2\right)^5$	$\frac{1}{32}x^5 + \frac{5}{16}x^4y^2 + \frac{5}{4}x^3y^4 + \frac{5}{2}x^2y^6 + \frac{5}{2}xy^8 + y^{10}$
quadrato di trinomio		
41	$(a + b - 2c)^2$	$a^2 + 2ab - 4ac + b^2 - 4bc + 4c^2$
42	$(2a - b - 3c)^2$	$4a^2 - 4ab - 12ac + b^2 + 6bc + 9c^2$
43	$(x^2 - 2x + 1)^2$	$x^4 - 4x^3 + 6x^2 - 4x + 1$
44	$\left(\frac{1}{2}m - 2n + 3q\right)^2$	$\frac{1}{4}m^2 - 2mn + 3mq + 4n^2 - 12nq + 9q^2$
45	$\left(\frac{2}{3}a^2 - 3a + 2\right)^2$	$\frac{4}{9}a^4 - 4a^3 + \frac{35}{3}a^2 - 12a + 4$
46	$(a^2 - bc + 2c)^2$	$a^4 - 2a^2bc + 4a^2c + b^2c^2 - 4bc^2 + 4c^2$
47	$\left(2x - 3y - \frac{1}{4}\right)^2$	$4x^2 - 12xy - x + 9y^2 + \frac{3}{2}y + \frac{1}{16}$
48	$(4a^2 + 3b^2 - 5c)^2$	$16a^4 + 24a^2b^2 - 40a^2c + 9b^4 - 30b^2c + 25c^2$
49	$\left(-\frac{2}{3}x^2 - 3xy - z\right)^2$	$\frac{4}{9}x^4 + 4x^3y + \frac{4}{3}x^2z + 9x^2y^2 + 6xyz + z^2$

50	$(a^m + b^n - b^p)^2$	$a^{2m} + 2a^m b^n - 2a^m b^p + b^{2n} - 2b^{n+p} + b^{2p}$
esercizi di riepilogo		
51	$(x - 2y + 1)(x - 2y - 1)$	$x^2 - 4xy + 4y^2 - 1$
52	$\left(\frac{1}{2}a - b^2 + 2c\right)\left(\frac{1}{2}a + b^2 + 2c\right)$	$\frac{1}{4}a^2 + 2ac + 4c^2 - b^4$
53	$\left(-\frac{9}{2}xy - \frac{1}{4}x^2y^2\right)^2$	$\frac{81}{4}x^2y^2 + \frac{9}{4}x^3y^3 + \frac{1}{16}x^4y^4$
54	$\left(\frac{3}{7}a^2b - \frac{7}{2}b^2c^2\right)^2$	$\frac{9}{49}a^4b^2 - 3a^2b^3c^2 + \frac{49}{4}b^4c^4$
55	$\left(\frac{3}{2}x^2y - \frac{2}{3}xy^2\right)^3$	$\frac{27}{8}x^6y^3 - \frac{9}{2}x^5y^4 + 2x^4y^5 - \frac{8}{27}x^3y^6$
56	$\left(\frac{7}{2}ab^2x - \frac{1}{3}xb\right)^3$	$\frac{343}{8}a^3b^6x^3 - \frac{49}{4}a^2b^5x^3 + \frac{7}{6}ab^4x^3 - \frac{1}{27}b^3x^3$
57	$(3m - 2n^2)^6$	$729m^6 - 2916m^5n^2 + 4860m^4n^4 - 4320m^3n^6 + 2160m^2n^8 + 576mn^{10} + 64n^{12}$
58	$\left(\frac{1}{2}x + y^2\right)^4$	$\frac{1}{16}x^4 + \frac{1}{2}x^3y^2 + \frac{3}{2}x^2y^4 + 2xy^6 + y^8$
59	$(2x^2y - xy^2 - x)^2$	$4x^4y^2 - 4x^3y^3 - 4x^3y + x^2y^4 + 2x^2y^2 + x^2$

60	$\left(\frac{2}{5}x - y^2 + \frac{3}{2}xy\right)^2$	$\frac{4}{25}x^2 - \frac{4}{5}xy^2 + \frac{6}{5}x^2y + y^4 - 3xy^3 + \frac{9}{4}x^2y^2$
espressioni con i prodotti notevoli		
61	$(2a - 1)^2 - (a + 2)^2 + (a + 4)^2$	$4a^2 + 13$
62	$\left(a + \frac{1}{3}x\right)^2 - \left(a - \frac{1}{2}x\right)\left(a + \frac{1}{2}x\right) + \frac{11}{36}x^2$	$\frac{2}{3}ax + \frac{2}{3}x^2$
63	$(2x - 3)^3 + 2x(2x - 5)^2 - 4(2x - 1)^2(x - 3) + 15$	$52x - 12x^2$
64	$\left(\frac{1}{3}x - y\right)^2 \left(\frac{1}{3}x + y\right) - \left(\frac{1}{3}x + y\right)^3$	$-\frac{4}{9}x^2y - \frac{4}{3}xy^2$
65	$\frac{1}{3}(x + b)^2 - \frac{4}{9}b^2 + \left(\frac{1}{6}x + \frac{1}{3}b\right)\left(\frac{1}{3}b - \frac{1}{6}x\right)$	$\frac{2}{3}bx + \frac{11}{36}x^2$
66	$(x + y)^2(x - y)^2 - x^3(x + 2y) + [x^2 - (x - y)^2](x + y)^2$	x^2y^2
67	$[(2 - ab)^2 - (ab - 1)(ab + 1)](5 + 4ab) - (5 - 4ab)(5 + 4ab)$	0
68	$7(4 + a)(a - 4) + 2(a - 2)(a - 3) + 5(a + 1)^2$	$14a^2 - 95$
69	$(2x^2 + y)^2 - (2x^2 + y)(2x^2 - y) - 4y(x)^2$	$2y^2$

70	$(2x^2 + y)(2x^2 - y) + (2x^2 + y)^2 - (2x^2 - y)^2 + 4x^2y: \left(-\frac{1}{2}\right)$	$4x^4 - y^2$
71	$(a^2 - 3b^2)^2 + \left(2a^2 - \frac{1}{3}b^2\right)\left(2a^2 + \frac{1}{3}b^2\right) - \left(\frac{4}{3}a^2 - 3b^2\right)^2$	$\frac{29}{9}a^4 + \frac{1}{9}b^4 + 2a^2b^2$
72	$(x^3 + y^3)(x^3 - y^3) + (x + y)^3(x - y)^3 - 3x^2y^2(x + y)(y - x) + 8y^7: 4y$	$2x^6$
72	$a^2(a - 3)(a + 2) + (a^2 - 3a + 2)^2 - 2a(a - 1)^3 + a(a^2 + 10)$	$a^2 + 4$
74	$(a + b - 2)^2 - (a + b + 2)^2 - 4(a + b + 2) + 12(a + b)$	-8
75	$\left(a + \frac{1}{3}b\right)\left(\frac{1}{3}b - a\right) - \left(b - \frac{1}{2}a\right)^2 - ab$	$-\frac{5}{4}a^2 - \frac{8}{9}b^2$
76	$(1 + a^2)^3 - (1 + a^3)^2 - 3a^2(1 + a)(1 - a) - 2a^3(3a + 1)$	$-4a^3$
77	$(x - y + z)(x - y - z) - (x + y + z)(x - y - z) + 2y(x - y)$	$2xy$
78	$(x^2 - x^4)(x^2 + x^4) - (x^2 - 1)^2 + [(x + 1)(x - 1)(x^2 + 1) + 2]^2$	$2x^4 + 2x^2$
79	$\left(\frac{2}{5}a - b^2\right)\left(b^2 + \frac{2}{5}a\right) - \left[\left(\frac{1}{2}a + \frac{2}{3}b\right)^3 - \frac{8}{27}b^3 - \frac{1}{6}ab(3a + 4b)\right]: \frac{25}{32}a$	$-b^4$

80	$\left(\frac{4}{3}ab + 3\right)\left(3 - \frac{4}{3}ab\right) + a\left(\frac{4}{3}a + \frac{2}{3}b^2\right)^2 - (4a + 6)\left(\frac{4}{9}a^2 + 1 - \frac{2}{3}a\right) + \frac{5}{9}ab^4$	$3 + ab^4$
81	$[-9xy(3y^2 + 1) + (-x^2y - 1)^2 - (3x + 9xy^2)(-3y) - (1 + x^2y)^2]:x^2$	0