Divisioni tra polinomi

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esegui le divisioni tra polinomi

1	$(6a^2+5a+1):(a+1)$	$Q(a)=6a-1$ $R=2$
2	$(3y^4+9y^3+5y^2+9y-18):(y+3)$	$Q(y)=3y^3+5y-6$
3	$\left(-x^3-\frac{11}{2}x^2+9\right):(-2x-3)$	$Q(x)=\frac{1}{2}x^2+2x-3$
4	$(-2x^3+5bx^2-2b^2x):(x-2b)$	$Q(x)=-2x^2+bx$
5	$(4x^4+3x^3y-2xy^3+y^4):(2x+3y)$	$Q(x)=2x^3-\frac{3}{2}x^2y+\frac{9}{4}xy^2-\frac{35}{8}y^3$ $R=\frac{113}{8}y^4$
6	$(x^4-2x^2y^2-x^3y+2y^4):(2y-2x)$	$Q(x)=-\frac{1}{2}x^3+xy^2+y^3$
7	$(x^5-7x^3+1):(x^2-3)$	$Q(x)=x^3-4x$ $R(x)=-12x+1$

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8	$(x^5 - 7x^4 + 2x^2 - 1) : (x^2 + 1)$	$Q(x) = x^3 - 7x^2 - x + 9$ $R(x) = x - 10$
9	$(16x^3 - 8x^2 - 11x + 6) : (4x^2 + x - 2)$	$Q(x) = 4x - 3$
10	$(4y^3 + 4y^2 - 19y + 6) : (2y^2 + 5y - 2)$	$Q(y) = 2y - 3$
11	$(a^4 - a - 2 + 4a^3 + 4a^2) : (a^2 + 2 + 3a)$	$Q(a) = a^2 + a - 1$
12	$(x + 2x^4) : (3 + x^2 - x)$	$Q(x) = 2x^2 + 2x - 4$ $R(x) = -9x + 12$
13	$(3b^4) : (b^2 + b + 1)$	$Q(b) = 3b^2 - 3b$ $R(b) = 3b$
14	$(2x^4 + 8x^3y + 2x^2y^2 - 2y^4) : (2x^2 - 4y^2)$	$Q(x) = x^2 + 4xy + 3y^2$ $R(x) = 16xy^3 + 10y^4$
15	$(4y^4 + y^2z^2) : (2y^2 + 3yz + 2z^2)$	$Q(y) = 2y^2 - 3yz + 3z^2$ $R(y) = -3yz^3 - 6z^4$
16	$(x^4 - 2x^2y^2 + 8xy^3 - 3y^4) : (x^2 + 2xy - y^2)$	$Q(x) = x^2 - 2xy + 3y^2$

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17	$(2xy^2 + 9x^3 + 4y^3) : (2y + 3x)$	$Q(x) = 3x^2 - 2xy + 2y^2$
18	$(-13a^2b^2 + a^4 + 38b^4) : (a^3 + 2a^2b - 9ab^2 - 18b^3)$	$Q(a) = a - 2b$ $R(a) = 2b^4$
19	$(6x^4 - 4y^4 - 3xy^3 + 9x^3y + 10x^2y^2) : (3x^2 - y^2)$	$Q(x) = 2x^2 + 3xy + 4y^2$
20	$(x^4 + 6x + 1) : (x^2 + x + 3)$	$Q(x) = x^2 - x - 2$ $R(x) = 11x + 7$
21	$(3x^6 - 5x^3 + 2x - 1) : (x^3 - 2x^2 - 3)$	$Q(x) = 3x^3 + 6x^2 + 12x + 28$ $R(x) = 74x^2 + 38x + 83$
22	$(x^3 + 2x^2 + 3x - 3) : (x^2 + x - 3)$	$Q(\mathrm{x}) = x + 1$ $R(\mathrm{x}) = 5x$
23	$(x^2 - y^2) : (x - y)$	$Q(x) = x + y$
24	$(4x^2 - 9y^2) : (2x + 3y)$	$Q(x) = 2x - 3y$

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esegui le divisioni tra polinomi e dove possibile applica il teorema del resto e la regola di Ruffini

25	$(3a^2+2a+5):(a+3)$	$Q(a)=3a-7$ $R=26$
26	$(t^4+2t^3-t+1):(t+1)$	$Q(t)=t^3+t^2-t$ $R=1$
27	$(3x^2-5x-7):(x-3)$	$Q(x)=3x+4$ $R=5$
28	$(2x^3-5x^2+3x+1):(x-2)$	$Q(x)=2x^2-x+1$ $R=3$
29	$(x^3+2x^2+x+6):(x^2-x+2)$	$Q(x)=x+3$ $R(x)=2x$
30	$(x^3-3x^2+6x-5):(x^2-2x+1)$	$Q(x)=x-1$ $R(x)=3x-4$
31	$(x^4+2x^3-x^2-3x+3):(x^2-2x+1)$	$Q(x)=x^2+4x+6$ $R(x)=5x-3$
32	$x^4:(x^2+x+1)$	$Q(x)=x^2-x$ $R(x)=x$
33	$(-x^5-2x^4+x^3+5x^2+2x-2):(-x^3-x^2+1)$	$Q(x)=x^2+x-2$ $R(x)=2x^2+x$

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34	$(5x^2 - 18x - 8) : (x - 4)$	$Q(x) = 5x + 2$
35	$(2x^3 - 3x^2 - 4x + 3) : (x - 2)$	$Q(x) = 2x^2 + x - 2$ $R = -1$
36	$(x^2 - 2x + 1) : (x - 1)$	$Q(x) = x - 1$
37	$(x^2 - 5x + 6) : (x - 2)$	$Q(x) = x - 3$
38	$(x^4 - 16) : (x^2 + 4)$	$Q(x) = x^2 - 4$
39	$(x^6 - 1) : (x^3 + 1)$	$Q(x) = x^3 - 1$
40	$(y^6 - 1) : (y^2 - 1)$	$Q(y) = y^4 + y^2 + 1$
41	$(6x^2 - x - 2) : (3x - 2)$	$Q(x) = 2x + 1$
42	$(3x^2 + 22x + 24) : (x + 6)$	$Q(x) = 3x + 4$

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43	$(a^5 + 2a^4 - 3a^2 + a - 1) : (a + 2)$	$Q(a) = a^4 - 3a + 7$ $R = -15$
44	$(12y^3 + 23y^2 + 5y) : (4y + 1)$	$Q(y) = 3y^2 + 5y$
45	$(8x^3 + 2x) : (2x - 1)$	$Q(x) = 4x^2 + 2x + 2$ $R = 2$
46	$(x^3 + 2x^2) : (x^2 + x)$	$Q(x) = x + 1$ $R(x) = -x$
47	$(x^4 - 3x^2 + 2) : (x - 1)$	$Q(x) = x^3 + x^2 - 2x - 2$
48	$(x^4 - 2x^3 + 3x - 5) : (x + 3)$	$Q(x) = x^3 - 5x^2 + 15x - 42$ $R = 121$
49	$(8x^3 - 6x^2 - 10x - 7) : (4x^2 + 5x + 3)$	$Q(x) = 2x - 4$ $R(x) = 4x + 5$
50	$(4a^3 - 6a^2 + 6a - 1) : (2a^2 + a + 4)$	$Q(a) = 2a - 4$ $R(a) = 2a + 15$
51	$(3x^3 + 4x^2 + 4x + 1) : (x^2 + x + 1)$	$Q(x) = 3x + 1$

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52	$(2x^3 - x^2 - 5x + 3) : (x^2 + x - 1)$	$Q(x) = 2x - 3$
53	$(4a^3 + 4a^2 + a - 2) : (2a^2 + 3a + 2)$	$Q(a) = 2a - 1$
54	$(12y^3 + 21y^2 + 6y - 3) : (y^2 + 2y + 1)$	$Q(y) = 12y - 3$
55	$(40x^3 - 66x^2 - 3x - 7) : (10x^2 + x + 1)$	$Q(x) = 4x - 7$
56	$(x^4 + 2x^3 + 3x^2 + 2x + 1) : (x^2 + x + 1)$	$Q(x) = x^2 + x + 1$
57	$(x^5 + 2x^4 - 3x^2 + 5x) : (x + 2)$	$Q(x) = x^4 - 3x + 11$ $R = -22$
58	$(x^5 + 4x^4 + 3x^3 + 2x^2 + x) : (x - 1)$	$Q(x) = x^4 + 5x^3 + 8x^2 + 10x + 11$ $R = 11$
59	$(x^5 + 2x^4 + 3x^3 + 4x^2 + x) : (x - 1)$	$Q(x) = x^4 + 3x^3 + 6x^2 + 10x + 11$ $R = 11$
60	$(2a^6 + 4a^4 + 3a^2 - 1) : (a - 1)$	$Q(a) = 2a^5 + 2a^4 + 6a^3 + 6a^2 + 9a + 9$ $R = 8$

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61	$(x^2 - 3xy + 2y^2) : (x - 2y)$	$Q(x) = x - y$
62	$(x^7 + x^5 + x^3 + x) : (x - 1)$	$Q(x) = x^6 + x^5 + 2x^4 + 2x^3 + 3x^2 + 3x + 4$ $R = 4$
63	$(x^9 + x^8 + x^7 + x^6) : (x - 1)$	$Q(x) = x^8 + 2x^7 + 3x^6 + 4x^5 + 4x^4 + 4x^3 + 4x^2 + 4x + 4$ $R = 4$
64	$(3x^3 + 4x^2 - 4x - 7) : (3x - 2)$	$Q(x) = x^2 + 2x$ $R = -7$
65	$(4a^3 + 4a^2 - 19a + 6) : (2a - 3)$	$Q(a) = 2a^2 + 5a - 2$
66	$(6x^3 - 2x^2 + 3x - 1) : (3x - 1)$	$Q(x) = 2x^2 + 1$
67	$(x^4 + 3x^3 - 5x + 2) : (x + 4)$	$Q(x) = x^3 - x^2 + 4x - 21$ $R = 86$
68	$(2x^5 - 3x^2 + 5) : (x^2 - 2x)$	$Q(x) = 2x^3 + 4x^2 + 8x + 13$ $R(x) = 26x + 5$

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69	$(x^3 - 5x + 1) : (x - 3)$	$Q(x) = x^2 + 3x + 4$ $R = 13$
70	$(-x^4 + x^2 - 1) : (-x + 5)$	$Q(x) = x^3 + 5x^2 + 24x + 120$ $R = -601$
71	$(2x^5 - x^4 + 2x^3 - 1) : (x^2 + 2)$	$Q(x) = 2x^3 - x^2 - 2x + 2$ $R(x) = 4x - 5$
72	$(x^5 - 2x^4 - 5x^3 + 17x^2 - 14x) : (x^2 - 2x)$	$Q(x) = x^3 - 5x + 7$
73	$(x^3 - 2x^2 + 2x + 5) : (x + 1)$	$Q(x) = x^2 - 3x + 5$
74	$(x^4 + 2x^2 + 5) : (x - 2)$	$Q(x) = x^3 + 2x^2 + 6x + 12$ $R = 29$
75	$(2x^3 + bx^2 - 4b^2x + 5b^3) : (x + 2b)$	$Q(x) = 2x^2 - 3bx + 2b^2$ $R = b^3$
76	$(4a^3 + 4a^2 + a - 2) : (2a - 1)$	$Q(a) = 2a^2 + 3a + 2$

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77	$(2x^3 + x + 1) : (2x - 1)$	$Q(x) = x^2 + \frac{1}{2}x + \frac{3}{4}$ $R = \frac{7}{4}$
78	$(-4x^3 + 10x^2 - 10x + 3) : (-2x + 1)$	$Q(x) = 2x^2 - 4x + 3$
79	$(4a^3 + 3a^2 - 15a - 14) : (4a + 7)$	$Q(a) = a^2 - a - 2$
80	$(-9a^3 + a + 2) : (3a - 2)$	$Q(a) = -3a^2 - 2a - 1$
81	$(5x^3 - 6x^2 + x - 2) : (x - 2)$	$Q(x) = 5x^2 + 4x + 9$ $R = 16$
82	$(6x^2 - 6x + 14) : (3x + 4)$	$Q(x) = 2x - \frac{14}{3}$ $R = \frac{98}{3}$
83	$(-8x^2 - 6x + 14) : (3x + 4)$	$Q(x) = -\frac{8}{3}x + \frac{14}{9}$ $R = \frac{70}{9}$

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84	$\left(\frac{1}{6}x^2+\frac{7}{8}x-\frac{3}{4}\right):\left(\frac{2}{3}x-\frac{1}{2}\right)$	$Q(x)=\frac{1}{4}x+\frac{3}{2}$
85	$\left(4x^2-\frac{5}{2}x+\frac{3}{2}x^3-3\right):(2+3x)$	$Q(x)=\frac{1}{2}x^2+x-\frac{3}{2}$
86	$\left(-3x^4+\frac{1}{9}xy^3\right):(-3x-2y)$	$Q(x)=x^3-\frac{2}{3}x^2y+\frac{4}{9}xy^2-\frac{1}{3}y^3$ $R=-\frac{2}{3}y^4$
87	$\frac{3}{4}y^3:\left(\frac{1}{2}y+3\right)$	$Q(y)=\frac{3}{2}y^2-9y+54$ $R=-162$
88	$\left(\frac{2}{3}x^3-\frac{7}{6}a^2x+\frac{5}{2}a^3\right):\left(x+\frac{3}{2}a\right)$	$Q(x)=\frac{2}{3}x^2-ax+\frac{a^2}{3}$ $R=2a^3$
89	$(a^4+2a^3b-2ab^3-b^4):(a-b)$	$Q(a)=a^3+3a^2b+3ab^2+b^3$
90	$(x^3+y^3+xy^2+x^2y+2x^2+2xy):(x^2+y^2+2x)$	$Q(x)=x+y$

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91	$(3x^4 - 6x^3y + 2y^3 + x^3 - xy^2 - 2x^2y) : (3x^3 + x^2 - y^2)$	$Q(x) = x - 2y$
92	$(x^2 + 2xy + y^2) : (x + y)$	$Q(x) = x + y$
93	$(4a^4 + 3a^3b - 2ab^3 + 4b^4) : (2a^2 - ab + b^2)$	$Q(a) = 2a^2 + \frac{5}{2}ab + \frac{1}{4}b^2$ $R(a) = -\frac{17}{4}ab^3 + \frac{15}{4}b^4$
94	$(x^4 + x^2y^2 + y^4) : (x^2 - xy + y^2)$	$Q(x) = x^2 + xy + y^2$
95	$(-4a^3 + 19a^2b - 9b^3) : (2a - 3b)$	$Q(a) = -2a^2 + \frac{13}{2}ab + \frac{39}{4}b^2$ $R = \frac{81}{4}b^3$
96	$(x^4 - x^2 - 2x - 1) : (x^2 - x - 1)$	$Q(x) = x^2 + x + 1$
97	$(6b^4 + 2b^3 - 13b^2 + b - 8) : (2b^2 - 3)$	$Q(b) = 3b^2 + b - 2$ $R(b) = 4b - 14$

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98	$(x^4+3x^3+x^2+4x+8):(x+3)$	$Q(x)=x^3+x+1$ $R=5$
99	$\left(-\frac{x^5}{2}+\frac{5}{4}x^3+\frac{3}{2}x-1\right):\left(-\frac{x^2}{2}+1\right)$	$Q(x)=x^3-\frac{x}{2}$ $R(x)=2x-1$
100	$(6x^3-2x^2+3x-1):(2x^2+1)$	$Q(x)=3x-1$
101	$(4x^3-5x+16):(2x^2-3x+2)$	$Q(x)=2x+3$ $R=10$
102	$(x^6+2x^4-3x+5):(x+2)$	$Q(x)=x^5-2x^4+6x^3-12x^2+24x-51$ $R=107$
103	$(x^5+7x^4-2x+3):(x^2-5)$	$Q(x)=x^3+7x^2+5x+35$ $R(x)=23x+178$
104	$(x^6+5x^4-3x^2+x):(x+2)$	$Q(x)=x^5-2x^4+9x^3-18x^2+33x-65$ $R=130$

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105	$(x^4+6x^3+2x-3):(x^3-3)$	$Q(x)=x+6$ $R(x)=5x+15$
106	$(x^5+3x^4-5x^3+3):\left(x+\frac{1}{2}\right)$	$Q(x)=x^4+\frac{5}{2}x^3-\frac{25}{4}x^2+\frac{25}{8}x-\frac{25}{16}$ $R=\frac{121}{32}$
107	$(2x^3-7x+1):(x-5)$	$Q(x)=2x^2+10x+43$ $R(x)=216$
108	$(-2x+3x^4-10x^2+8+x^3):(x^2-2)$	$Q(x)=3x^2+x-4$
109	$\left(2x^3+\frac{21}{10}x+\frac{9}{5}\right):\left(x^2-\frac{1}{2}x-\frac{1}{5}\right)$	$Q(x)=2x+1$ $R(x)=3x+2$
110	$(2y^4-y^3-3y^2-5y-19):(2y^2-y+5)$	$Q(y)=y^2-4$ $R(y)=1-9y$
111	$\left(\frac{2}{3}x^4-\frac{25}{36}x^3+\frac{7}{6}x^2-\frac{25}{48}x+\frac{3}{8}\right):\left(\frac{2}{3}x^2-\frac{1}{4}x+\frac{1}{2}\right)$	$Q(x)=x^2-\frac{2}{3}x+\frac{3}{4}$

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