EQUAZIONI DI 2° GRADO NUMERICHE INTERE

1 $2x^2-5x+17=0$ $[imp.]$

2 $x^2-x-1=0$ $\left[\frac{1\pm\sqrt{5}}{2}\right]$

3 $20x^2-29x+5=0$ $\left[\frac{1}{5};\frac{5}{4}\right]$

4 $x^2-2\sqrt{3}x-13=0$ $[\sqrt{3}\pm 4]$

5 $x^2-\sqrt{2}x-\frac{3}{2}=0$ $\left[\frac{3\sqrt{2}}{2};-\frac{\sqrt{2}}{2}\right]$

6 $x^2-6\sqrt{2}x+6=0$ $[3\sqrt{2}\pm 2\sqrt{3}]$

7 $\frac{8-x^2}{4}+\frac{x(x-1)}{3}-1=0$ $[imp.]$

8 $(3x-1)^2-(x-2)^2=23x-\left(\frac{2x-1}{2}\right)^2+\frac{1}{4}$ $\left[-\frac{1}{9};3\right]$

9 $2(1-x+2\sqrt{2})=(x-\sqrt{2})^2$ $[-2;2\sqrt{2}]$

10 $4\left(\frac{2}{3}x^2-\frac{1}{5}x\right)+(x+1)^2-1=x^2+\frac{3}{5}$ $\left[-\frac{3}{4};\frac{3}{10}\right]$

SCOMPOSIZIONE DEL TRINOMIO DI 2° GRADO (Semplificare le frazioni)

1 $\frac{2x^2-11x-6}{2x^2-3x-2}$ $\left[\frac{x-6}{x-2}\right]$

2 $\frac{3x^2+5x-2}{x^2-4}$ $\left[\frac{3x-1}{x-2}\right]$

3 $\frac{2x^3+x^2-x}{x^2-1}$ $\left[\frac{x(2x-1)}{x-1}\right]$

4 $\frac{x^2-(\sqrt{3}-1)x-\sqrt{3}}{2x^2+5x+3}$ $\left[\frac{x-\sqrt{3}}{2x+3}\right]$

EQUAZIONI DI 2° GRADO NUMERICHE FRATTE

1 $\frac{x+\sqrt{3}}{x-\sqrt{3}}=4+\frac{\sqrt{3}-x}{x+\sqrt{3}}$ $[\pm 3]$

2 $\frac{1}{x^2-1}+\frac{1}{x+1}=\frac{1}{x-1}+\frac{5}{3}$ $\left[\pm\sqrt{\frac{2}{5}}\right]$

3 $\frac{x-2}{x-1}+\frac{x-2}{x-3}=2+\frac{x^2-6}{(x-3)(1-x)}$ $[\pm 2]$

4 $\frac{x}{x+2}-\frac{5}{x-2}=\frac{7x-6}{4-x^2}$ $[\pm 4]$

5 $\frac{x-1}{2x+1}+\frac{1+3x}{2x}=\frac{3x+9}{4x^2+2x}$ $[\pm 1]$

6 $\frac{1}{3}\left(\frac{2x-2}{x+2}-\frac{x-3}{x-2}\right)+\frac{2(10-x)}{12-3x^2}=\frac{1}{2-x}$ $[imp.]$

7 $\frac{y+2}{y+1}=\frac{y-2}{1-y}-\frac{4}{y-1}$ $[-2;0]$

8 $\frac{3x+5}{x-2}-\frac{x-2}{x+2}=-\frac{3}{2}$ $\left[-\frac{30}{7};0\right]$

9 $\frac{x\sqrt{3}}{2x+\sqrt{3}}=\frac{2x}{2\sqrt{3}+2}$ $\left[\frac{3}{2};0\right]$

10 $\frac{x\sqrt{3}}{2\sqrt{3}-x}=\frac{2x}{5-x\sqrt{3}}$ $[\sqrt{3};0]$

11 $\frac{x}{x-2}-\frac{6}{x^2-x-2}=\frac{5}{x+1}$ $[imp.]$

12 $\frac{x^2+8x+11}{x^2+5x+6}+\frac{x-1}{x+3}=\frac{x-2}{x+2}$ $[-5]$

13 $\frac{8x}{x^2+10x+25}=\frac{4}{x^2+7x+10}-\frac{1}{x+2}$ $\left[\frac{-11\pm2\sqrt{19}}{9}\right]$

14 $\frac{7-x}{x-5}=\frac{13}{6}-\frac{x-5}{7-x}$ $\left[\frac{29}{5};\frac{31}{5}\right]$

15 $\frac{1}{4}+\frac{1}{3}\cdot\frac{(x+1)^2}{x^2+4x+4}-\frac{2}{3}-\frac{1}{3}\left(\frac{x+3}{x+2}\right)^2=0$ $\left[-\frac{26}{5}\right]$

16 $\frac{x}{2x+1}+\frac{25}{3x+5}=1+\frac{6(7x+5)}{6x^2+13x+5}$ $[imp.]$

17 $\frac{x}{x-1}-\frac{x}{x+1}-\frac{2x}{x^2-2x+1}=\frac{2}{x^2-1}-\frac{1}{x-1}-\frac{1}{x+1}$ $[2\pm\sqrt{3}]$

18 $\frac{2}{x^2-3x+2}+\frac{2x(3-x)+4}{x^3-2x^2-x+2}=0$ $[2\pm\sqrt{7}]$

19 $\frac{1}{x-1}+\frac{6}{2x-7}=\frac{9}{4}-\frac{5}{2x^2-9x+7}$ $\left[\frac{95}{18}\right]$

20 $\frac{1}{-x^2+5x-6}=\frac{1}{x-3}\left(1+\frac{1}{x-3}\right)+\frac{1}{2-x}\left(1-\frac{1}{2-x}\right)$ $\left[\frac{4\pm\sqrt{2}}{2}\right]$

EQUAZIONI DI GRADO SUPERIORE AL 2°

1 $(x^2-3x)(2x^2+1)=0$ $[0;3]$

2 $(x^2-9x+14)(4x^2-9)=0$ $\left[\pm\frac{3}{2};2;7\right]$

3 $(4x^2+8x+3)(5x^2+2)=0$ $\left[-\frac{3}{2};-\frac{1}{2}\right]$

4 $(3x^2+x+1)(x^2-2x+10)=0$ $[imp.]$

5 $(3x^2-4x-15)(x^2+4x+4)=0$ $\left[-2;3;-\frac{5}{3}\right]$

6 $2x^3+2x^2-x-1=0$ $\left[-1;-\frac{\sqrt{2}}{2}\right]$

7	$5x^3-x^2-20x+4=0$	$\left[\pm 2;\frac{1}{5}\right]$
8	$2x^3+x^2-11x-10=0$	$\left[-2;-1;\frac{5}{2}\right]$
9	$5x^3+4x^2-31x+6=0$	$\left[-3;2;\frac{1}{5}\right]$
10	$x^3+3x^2-2x-6=0$	$\left[-3;\pm\sqrt{2}\right]$
11	$36x^3-3x^2-3x=0$	$\left[0;\frac{1}{3};-\frac{1}{4}\right]$
12	$6x^3+19x^2-26x-24=0$	$\left[-4;-\frac{2}{3};\frac{3}{2}\right]$
13	$6x^3+4x^2+3x+2=0$	$\left[-\frac{2}{3}\right]$
14	$4x^3+11x^2+6x=0$	$\left[-2;0;-\frac{3}{4}\right]$
15	$x^3+6x^2-3x-18=0$	$\left[-6;\pm\sqrt{3}\right]$
16	$4x^3+12x^2-3x-9=0$	$\left[-3;\pm\frac{\sqrt{3}}{2}\right]$
17	$15x^3+x^2-6x=0$	$\left[0;-\frac{2}{3};\frac{3}{5}\right]$
18	$x^3-2x^2-x+2=0$	$\left[\pm 1;2\right]$
19	$9x^3-3x^2+12x-4=0$	$\left[\frac{1}{3}\right]$
20	$7x^3-8x^2-14x+16=0$	$\left[\frac{8}{7};\pm\sqrt{2}\right]$
21	$x^4+x^3-3x^2-3x=0$	$\left[-1;0;;\pm\sqrt{3}\right]$
22	$12x^4+35x^3+20x^2-5x-2=0$	$\left[-2;-1;-\frac{1}{4};\frac{1}{3}\right]$
23	$4x^4+4x^3-25x^2-x+6=0$	$\left[2;-3;\pm\frac{1}{2}\right]$
24	$x^4-2x^3-10x^2+11x-12=0$	$\left[4;-3\right]$
25	$2x^4+3x^3+5x^2+6x+2=0$	$\left[-1;-\frac{1}{2}\right]$
26	$x^4+6x^3+8x^2-6x-9=0$	$\left[\pm 1;-3\right]$
27	$4x^4-4x^3+5x^2-4x+1=0$	$\left[\frac{1}{2}\right]$
28	$x^5+3x^4-5x^3-15x^2+4x+12=0$	$\left[\pm 1;\pm 2;-3\right]$
29	$2x^5+3x^4-6x^3+6x^2-8x+3=0$	$\left[1;-3;\frac{1}{2}\right]$
30	$x^5-14x^3-32x=0$	$\left[0;\pm 4\right]$
31	$3x^5+7x^3+2x=0$	$\left[0\right]$
32	$x^5-2x^4-x+2=0$	$\left[2;\pm 1\right]$