F:=(x+1)(x^3-x+1);x^4 + x^3 - x^2 + 1
F:=x^3-x+1;
GCDPolySTURMVerbose(F,Der(F,x));
(x^3 - x + 1)=(1/3x)*(3x^2 - 1)+(-2/3x + 1)
(3x^2 - 1)=(3/2x + 9/4)*(2x - 3)+(23/4)
(2x - 3)=(-2x + 3)*(-1)+(0)
Lista delle coppie [[x^3 - x + 1, 3x^2 - 1], [3x^2 - 1, 2x - 3], [2x - 3, -1]]
Record[GCD = -1, Sequence = [x^3 - x + 1, 3x^2 - 1, 2x - 3, -1]]
1 root

X= -1.32

F:=x^4-x^3-1;
GCDPolySTURMVerbose(F,Der(F,x));
(x^4 - x^3 - 1)=(1/4x - 1/16)*(4x^3 - 3x^2)+(-3/16x^2 - 1)
(4x^3 - 3x^2)=(4/3x - 1)*(3x^2 + 16)+(-64/3x + 16)
(3x^2 + 16)=(3/4x + 9/16)*(4x - 3)+(283/16)
(4x - 3)=(-4x + 3)*(-1)+(0)
Lista delle coppie [[x^4 - x^3 - 1, 4x^3 - 3x^2], [4x^3 - 3x^2, 3x^2 + 16], [3x^2 + 16, 4x - 3], [4x - 3, -1]]
Record[GCD = -1, Sequence = [x^4 - x^3 - 1, 4x^3 - 3x^2, 3x^2 + 16, 4x - 3, -1]]
2 roots

X = -0.81 , X=1.38

F:=3x^4-7x^3+1;
GCDPolySTURMVerbose(F,Der(F,x));
(3x^4 - 7x^3 + 1)=(3/4x - 7/16)*(4x^3 - 7x^2)+(-49/16x^2 + 1)
(4x^3 - 7x^2)=(4/49x - 1/7)*(49x^2 - 16)+(64/49x - 16/7)
(49x^2 - 16)=(-49/4x - 343/16)*(-4x + 7)+(2145/16)
(-4x + 7)=(4x - 7)*(-1)+(0)
Lista delle coppie [[3x^4 - 7x^3 + 1, 12x^3 - 21x^2], [4x^3 - 7x^2, 49x^2 - 16], [49x^2 - 16, -4x + 7], [-4x + 7, -1]]
Record[GCD = -1, Sequence = [3x^4 - 7x^3 + 1, 12x^3 - 21x^2, 49x^2 - 16, -4x + 7, -1]]
2 roots

X=0.57 X = 2.30

F:=F:=3x^3-5x+1;