Question: 02

Polynomial equation F(x) that's roots are real-positive ,real-negative and imaginary . You have to find three factor f1(x), f2(x) and f3(x) such that

f1(x)* f2(x)* f3(x) = F(x);

all roots of f1(x) is positive, real number with including 0,

all roots of f2(x) is negative, real number,

and all roots of f3(x) is imaginary.

Input:

t =number of test case;

Y = coefficient sequence of N+1 ; exp :- **equation x^4 + 2*x^3 + 4*x^2 – 2*x - 5 coefficient sequence is [1 2 4 -2 -5]**

Output:

f1(x), f2(x) and f3(x) = algebraic equations ;

Sample input:

1

[1 2 4 -2 -5]

Sample output:-

F1=(x-1)

F2=(x+1)

F3=(x-1-2*i)*(x-1+2*i)