Problem I. Diophantine equation - 2

Given numbers a, b, c, d, e. Count the number of such integers from 0 to 1000 that are the roots of the equation
(ax ^ 3 + bx ^ 2 + cx + d) / (x-e) = 0, and print their number.

Input data
The integers a, b, c, d and e are entered.

Output
Print the answer to the problem.

5	1	1
8	-8	-8
0	17	17
2	-10	-10
1	9	5
0	3	2

Examples of
input data
1
-2
1
0
1

(x-1)(x-2)(x-5)=(x^2-3x+2)(x-5)=x^3-3x^2+2x-5x^2+15x-10=
=x^3-8x^2+17x-10

output
1

input data
1
1
1
1
1

output
0

```
int a;
int b;
int c;
int d;
int e;
int x = 0;
int problem;
int collectZeros = 0;

std::cin >> a >> b >> c >> d >> e;

  while(x <= 1000) {
     if (x != e) {
        problem = ( a * x * x * x + b * x * x + c * x + d);
        if (problem == 0) {
                 collectZeros++;
        }
     }
     x++;
  }
  std::cout << "There are " << collectZeros  << " roots." << std::endl;
```