

```
#include <stdio.h>
#include <math.h>
int main(){
    // input
    int a, b, c;
    scanf("%dx^2 + %dx + %d = 0", &a, &b, &c);
```

/* NOTE: In this question, the correct thing to do is to use double instead of float variables to get higher precision computations. We announced during the lab that students should use float variables and float typecasts in this problem.

Students who have used double variables and double typecasts will not pass one test case due to this problem. However, they need not worry as they will also be given credit for their work.

If you have lost marks in one test case because you used double variables and double typecasts, please apply for regrading. Marks will be given irrespective of whether students have used float variables and float typecasts, or double variables and double typecasts. */

```
// Computation of discriminant
float d = (float)(b*b - 4*a*c);
// Computation of sum of roots
float sum = -(float)b/a;
// Computation of absolute difference of roots
float diff = sqrt(sum*sum - 4*(float)c/a);
// Computation of extremal point
float e = -(float)b/(2*a);
// Printing in output format
printf("Discriminant: %.3f\nExtremum: %.3f\nSum: %.3f\nDifference: %.3f", d, e, sum, diff);
return 0;
}
```