

```

#include <stdio.h>
#include "libs.h"
//-----
//                                     Exercise 3
//                                     -----
//
// General : The program performs the formula of the roots.
//
// Input   : 3 numbers (a,b,c from  $ax^2+bx+c$ ).
//
// Process : The program performs the formula of the roots.
//
// Output  : 2 numbers (sign and result).
//
//-----
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// Date       : 12.09.2019
//-----
void main(void)
{
    short num_a,
           num_b,
           num_c,
           delta,
           sign = ONE,
           result = ZERO;

    printf("Enter a,b,c from  $ax^2+bx+c$ : ");
    scanf("%hd%hd%hd", &num_a, &num_b, &num_c);

    // Calculate delta
    delta = (num_b * num_b) - (FOUR * num_a * num_c);
    result = -num_b / TWO * num_a;
    if (delta > ZERO)
    {
        sign = TWO;
        result = ZERO;
    }
    if (delta < ZERO)
    {
        sign = ZERO;
        result = ZERO;
    }

    printf("If you got sign '0' - not result\n\
If you got sign '1' - one result\n\
If you got sign '2' - two results:\nSign: %hd\nResult: %hd\n", sign, result);
}

```