



# Practice Arena

Practice problems aimed to improve your coding skills.

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# The Tale of Three Lines

## LAB-PRAC-03\_TYPES

**The Tale of Three Lines [20 marks]****Problem Statement**

You are given the equation of three lines in three variables. The equations will only contain integer values. Consider the  $3 \times 3$  matrix formed by this system of equations. Find the three minors of this matrix corresponding to the three elements in the first row of this matrix (in order) as well as the determinant of this matrix. Output these four numbers in four different lines.

**Caution**

1. Be careful about extra/missing lines and extra/missing spaces.
2. First output the value of the minor  $M_{11}$  then  $M_{12}$  then  $M_{13}$  followed by the determinant of this matrix. Give all values on different lines. Recall that  $M_{ij}$  denotes the minor of the matrix formed by removing the  $i$ th row and  $j$ th column of the matrix.

**INPUT:**

$$ax + by + c = 0$$

$$dx + ey + f = 0$$

$$gx + hy + i = 0$$

**OUTPUT:**

$M_{11}$

$M_{12}$

$M_{13}$

Determinant

**EXAMPLE:**

INPUT

$$0x + 1y + 0 = 0$$

$$1x + 0y + 0 = 0$$

$$1x + 1y + 1 = 0$$

OUTPUT:

0

1

1

-1

**Grading Scheme:**

Total marks: **[20 Points]**

There will be partial grading in this question. Printing each line of the output (there will be total of 4 lines in your output) will carry equal weightage. Each visible test case is worth 2 points and each hidden test case is worth 4 points. There are 2 visible test cases and 4 hidden test cases.

Please remember, however, that when you press Submit/Evaluate, you will get a green bar only if all parts of your answer are correct. Thus, if your answer is only partly correct, Prutor will say that you have not passed that test case completely, but when we do autograding afterwards, you will get partial marks.

 **Start Solving! (/editor/practice/6020)**