Integer Perimeter

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	512 megabytes

You are given six positive integers a, b, c, d, e and f. You need to find out whether there exists a triangle ABC with the following properties.

- $AB/BC = a/b$;
- $BC/CA = c/d$;
- $CA/AB = e/f$;
- Area of ABC is positive;
- The perimeter of the triangle is integer.

If such triangle exists, find the minimum possible value of its perimeter.

Input

The input consists of six lines, each containg one integer a, b, c, d, e and f ($1 \le a, b, c, d, e, f \le 1000$) respectively.

Output

If there is no triangle satisfying all the properties, print `-1`. Otherwise, print one integer — the minimum possible perimeter of such triangle.

Examples

standard input	standard output
1 1 2 2 3 3	1
1 2 3 4 5 6	-1
1 2 2 3 3 1	-1