Solving a Two-Variable System of Equations

Write a program that reads the coefficients $a, b, \ldots, f$ of the following system of equations, solves for $x$ and $y$ and prints the solution to the terminal. It is guaranteed that all coefficients will be integers and the given system of equations has exactly one set of integral solution. (So $ae - db \neq 0$.)

\begin{align}
ax + by &= c \tag{1} \\
dx + cy &= f \tag{2}
\end{align}

For your reference, here is one way to solve these equations. We will derive a formula for $x$ and $y$ in terms of the coefficients $a, b, \ldots, f$. Let’s assume $a \neq 0$. We divide (1) by $a$ and move $(b/a)y$ to the right to obtain

$$x = -(b/a)y + c/a. \tag{3}$$

Substituting $-(b/a)y + c/a$ for $x$ in (2), we have

$$-d(b/a)y + d(c/a) + cy = f \tag{4}$$

which further simplifies to

$$\frac{ae - db}{a} y = \frac{af - dc}{a}. \tag{5}$$

Thus we arrive at a formula for $y$ provided that $ae - db \neq 0$.

$$y = \frac{af - dc}{ae - db}. \tag{5}$$

Substitute (5) back into (3), we see that

$$x = \frac{-b}{a} \cdot \frac{af - dc}{ae - db} + \frac{c}{a} = \frac{ec - fb}{ae - db}. \tag{6}$$

We can verify that (5) and (6) satisfies both (1) and (2) provided $ae - db \neq 0$, regardless of whether $a \neq 0$ or not. We have thus obtained a formula for $x$ and $y$.

**Input Format**

The input has one line containing six integers $a, b, \ldots, f$.

We guarantee that $-10000 \leq a, b, c, d, e, f \leq 10000$.

**Output Format**

Print two lines to the terminal. The first line is $x$ and the second line is $y$.

We guarantee that $-10000 \leq x, y \leq 10000$.

**Examples**

\begin{itemize}
  \item **# 1**
    \begin{itemize}
      \item When given the input
        \begin{verbatim}
        1 1 5 1 2 3
        \end{verbatim}
      \item Your program should print
        \begin{verbatim}
        7
        -2
        \end{verbatim}
    \end{itemize}
  \item **# 2**
    \begin{itemize}
      \item When given the input
        \begin{verbatim}
        1 0 10000 0 1 -10000
        \end{verbatim}
      \item Your program should print
        \begin{verbatim}
        10000
        -10000
        \end{verbatim}
    \end{itemize}
\end{itemize}