4.4 The solutions of a system of simultaneous linear equations with two unknowns can be solved easily using Cramer's rule.

Assume that a system of equations is given as ax + by = c and ex + ey = fThen Cramer's rule states that if there is a solution (i.e. $a^*e - b^*d \neq 0$), $x = \frac{c^*e - f^*b}{a^*e - d^*b}$ and $x = \frac{a^*f - d^*c}{a^*e - d^*b}$

Write a programs which accepts the six input coefficients a, b, c, d, e and f and determines the solutions for x and y. If $a^*e - b^*d = 0$, print a message "The solutions are not unique or there exist no solution."

Sample running :

Enter the values for <i>a</i> , <i>b</i> , <i>c</i> , <i>d</i> , <i>e</i> , and <i>f</i> .				
🐂, Solutio	ons for simultaneous	inaar equ	ations	- 🗆 🗵
First e a b c	aquation	Seco d e f	nd equation 4.0 5.0 6.0	
This program finds the solution for the simultaneous linear equations : $ax + by = c$ and $dx + ey = f$.				
Please enter the six values (a, b, c, d, e and f):				
	<u>F</u> ind Roots		<u>E</u> xit	
Click the Find Roots command button.				
🐂 Solutio	ons for simultaneous	linaar equa	ations (
First e	equation	Seco	nd equation –	-1

First equation	Second equation			
a 1.0	d 4.0			
b 2.0	e 5.0			
c 3.0	f 6.0			
equations : ax + by = c and dx + ey = f. Please enter the six values (a, b, c, d, e and f):				
For the equations : 1.00 x + 2.00 y = 3.0 4.00 x + 5.00 y = 6.0	00 00			
The solutions are : x = -1.000 y = 2.000				
Eind Roots	<u>E</u> xit			

Enter another set of values for the six coefficients.

🛪, Solutions for simultaneous linaar equations 👘 📃 🗖				
First equation a 2.0 b 3.0 c 3.0 This program finds the solutio equations : ax + by = c and Please enter the six values (a	Second equation d = 4.0 e = 6.0 f = 5.0 In for the simultaneous linear d dx + ey = f. a, b, c, d, e and f):			
Find Roots	<u>E</u> xit			

Click the **Find Roots** button.

🚔 Solutions for simultaneous linaar equations 💦 📃 🗖 🗙				
First equation a 2.0 b 3.0 c 3.0 This program finds the solution equations : ax + by = c and	Second equation d 4.0 e 6.0 f 5.0 f for the simultaneous linear dx + ey = f.			
Please enter the six values (a,	b, c, d, e and f):			
For the equations : 2.00 x + 3.00 y = 3.00 4.00 x + 6.00 y = 5.00 The solutions are not unique ()) or there exist no solution.			
Eind Roots	<u> </u>			

Try other values. Click Exit button to leave.