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**

$ex + ey = f$

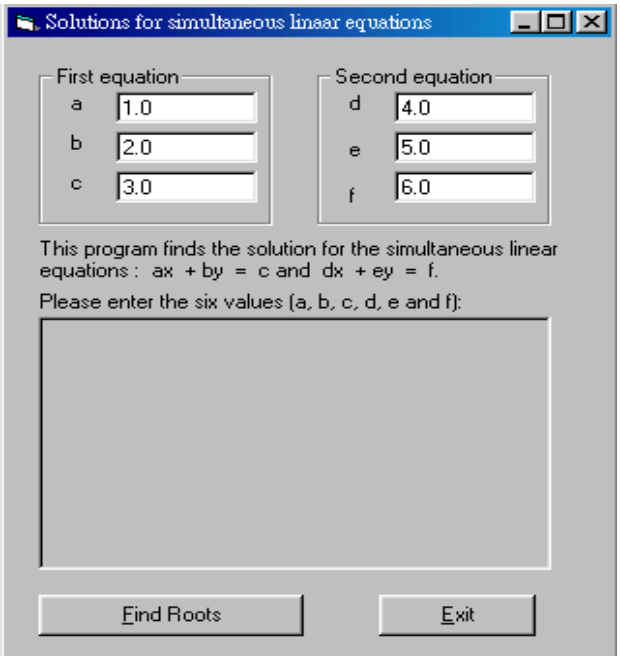
Then Cramer's rule states that if there is a solution (i.e. $a*e - b*d \neq 0$),

$$x = \frac{c*e - f*b}{a*e - d*b} \quad \text{and} \quad x = \frac{a*f - d*c}{a*e - d*b}$$

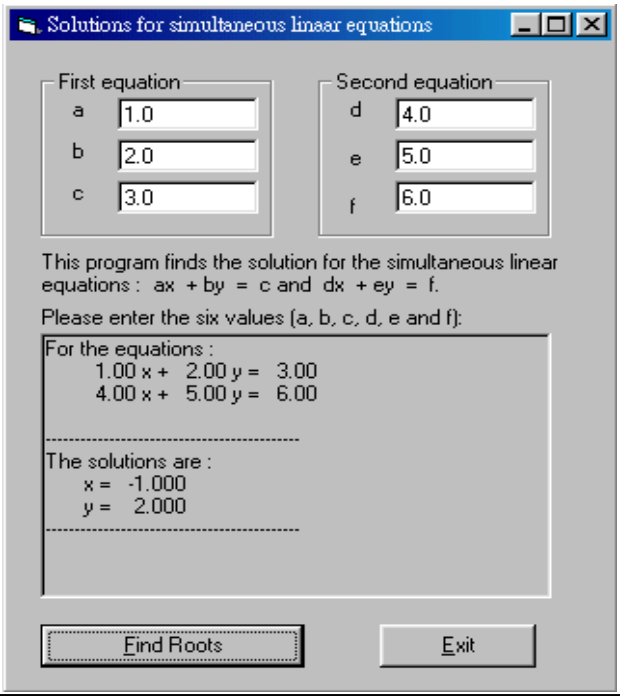
Write a programs which accepts the six input coefficients *a*, *b*, *c*, *d*, *e* and *f* and determines the solutions for *x* and *y*. If $a*e - b*d = 0$, print a message "The solutions are not unique or there exist no solution."

Sample running :

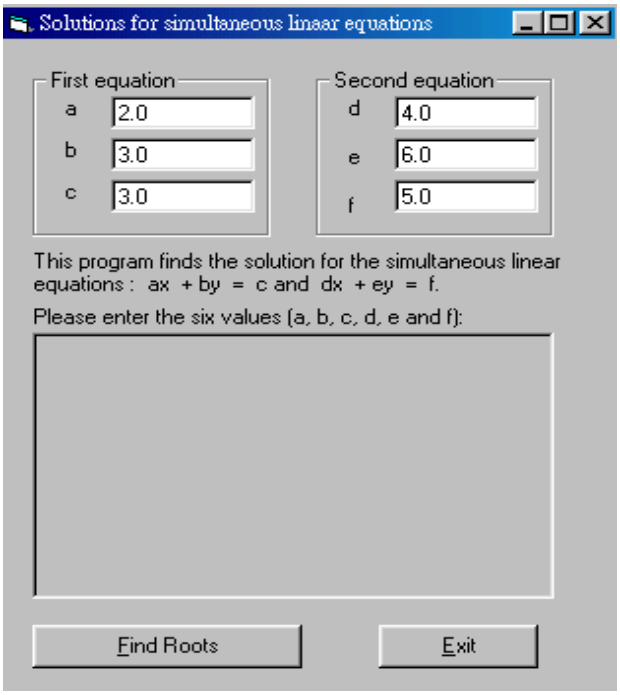
Enter the values for *a*, *b*, *c*, *d*, *e*, and *f*.



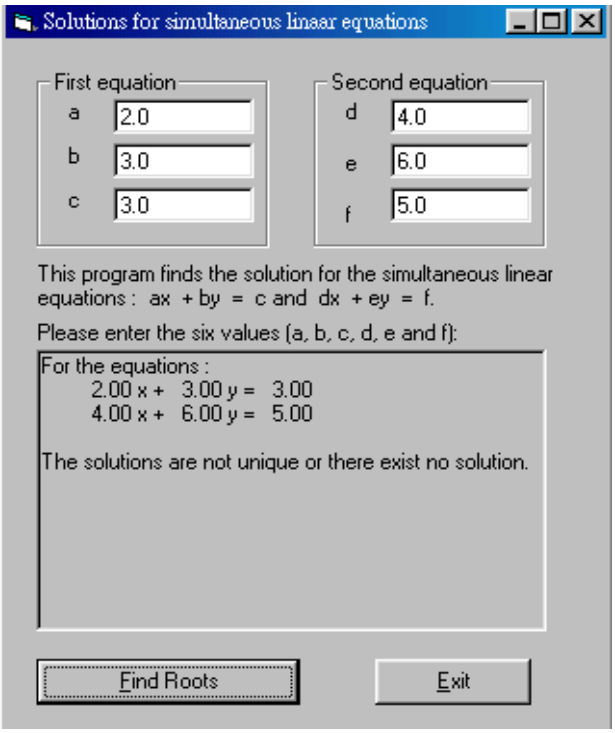
Click the **Find Roots** command button.



Enter another set of values for the six coefficients.



Click the **Find Roots** button.



Try other values.
Click Exit button to leave.