

CSci 111 - Computer Science I

Fall 2022

Closed Lab 4

Programming Activity

You can use Cramer's rule to solve the following 2x2 system of linear equation:

$$\begin{array}{lcl} ax + by = e & x = \frac{ed-bf}{ad-bc} & y = \frac{af-ec}{ad-bc} \\ cx + dy = f & & \end{array}$$

Write a program that prompts the user to enter a, b, c, d, e, and f and displays the result. If $ad - bc = 0$, report that "The equation has no solution", otherwise, display the values for **x** and **y**.

You can name your program **Cramer.java**

When done, **raise your hand** to let the TA know that you are ready to demonstrate your code for grading.

```
// import statement(s), class header, and main method header

// declare variables for the inputs and outputs

// prompt for inputs

// calculate x and y

// display the outputs (1 decimal place)
```

Sample Output

```
Enter a: 9
Enter b: 4
Enter c: 3
Enter d: -5
Enter e: -6
Enter f: -21

x is -2.0 and y is 3.0
>>
Enter a: 1
Enter b: 2
Enter c: 2
Enter d: 4
Enter e: 4
Enter f: 5

The equation has no solution
```