

## Homework Week 2 – Problem 2

Develop a program to find the solution of a linear system  $a_1x + b_1y = c_1$  and  $a_2x + b_2y = c_2$ .

- Inputs:  $a_1, b_1, c_1, a_2, b_2, c_2$  - float.
  - Note read  $a_1, b_1, c_1$  in one input()
- Output:  $x, y$ .
- How to do it:
  - Read the input variables.
  - Derive some formulas for finding  $x$  and  $y$ . [difficult but they are]
    - $x = (c_1b_2 - c_2b_1) / (a_1b_2 - a_2b_1)$
    - $y = (a_1c_2 - a_2c_1) / (a_1b_2 - a_2b_1)$
  - Calculate  $x, y$  with the above formulas
  - Print  $x, y$ .
  - Make a program to accommodate the case when  $a_1b_2 - a_2b_1 == 0$