

Computation: Discuss in your groups what these procedures do in general. Try it for the inputs provided but also feel free to try other inputs as well.

Note: To get the remainder of division, observe that 5 divided by 2 is 2 with a remainder of 1.

1. Consider the procedure PROCY:

Procedure PROCY:

You are given two numbers x and y as input.

You will return a single number as output.

Repeat the following steps until y has the value of 0

1. If the value of x is less than the value of y , switch the values of x and y
2. Set r to the *remainder* of the division of x by y .
3. Set x to the value of y
4. Set y to the value of r

The answer to return is the value of x .

Trace through the procedure for the following inputs and determine the output:

- a. $x= 36$ and $y=48$
- b. $x = 13$ and $y = 11$

2. Consider the procedure PROCX given in the text of pp21-22. Trace through the procedure and figure out what it is doing.