

Name \_\_\_\_\_

Active learning activity: Follow the instructions as directed during the Lecture.

**Keep this paper safe!**

**When labs begin, give this paper to your personal TA so  
your TA will know you are his or her student,  
and can give you the grading credit for working out this activity.**

(If you missed the lecture, print this and work out on the form and do the same thing.)

Your RED ticket. Use this ticket:  
To write a number on, to read a number to tell if it is 0, or to compare it to the number on another ticket, or to subtract it with another number from a ticket, and also, ERASE and replace with another number.

Your GREEN ticket. Use this ticket:  
To write a number on, to read a number to tell if it is 0, or to compare it to the number on another ticket, or to subtract it with another number from a ticket, and also, ERASE and replace with another number.

Your BLUE ticket. Use this ticket:  
To write a number on, to read a number to tell if it is 0, or to compare it to the number on another ticket, or to subtract it with another number from a ticket, and also, ERASE and replace with another number.

Write your name here \_\_\_\_\_ Job title: Computer.

Mission: Execute, run, perform, do, demonstrate Euclid's algorithm on parameter numbers 126, 102, 165

Your program, recipe, specific instructions, orders, directions, what to do EXACTLY:

- (1) Write parameter number 126 on your RED ticket.
- (2) Write parameter number 102 on your GREEN ticket.
- (3) Write parameter number 165 on your BLUE ticket.

Comment: The rest of the instructions are roughly "subtract like crazy" until you get two zeros.

But that is not clear enough for a computer.

- (4) Look over the numbers and pick any two that are NOT BOTH 0.
- (5) If step (4) failed because two tickets have 0's on them, then STOP, and shout out the answer by reading the number on the remaining ticket. Also write it here \_\_\_\_\_
- (6) See which of the two non-zero numbers you picked is bigger than the other.  
If they are the same, just pick one of the two tickets with the common number.
- (7) Put your thumb on the ticket whose number you picked.
- (8) Subtract the OTHER picked number from the number your thumb is on. (The difference should be 0 if they are the same, and positive if they are different.)
- (9) Erase (or cross out) the number under your thumb and overwrite it with the difference, the number you got from the subtraction you did in step 8. **REALLY! Actually using your pen/pencil COUNTS!**
- (10) Now, go back to step (4). You will repeat steps (4) – (9) over and over until you get two zeros.