**Selamawit Shibru (110608)**

**Assignment I September 2, 2019**

For each of the following problems write a defining table. Then write an algorithm with numbered steps to solve the problem. Then label each step with the name of the basic computer operation that the computer will use during that step.

1. **Defining table:-**

**Input:-** the total area of the customer’s lawn in square feet.

**Output:-** the amount to charge customers for mowing their lawns for an entire season.

**Processing:-** company charges 10 cents per square foot to mow a lawn one time and will mow each lawn once a week for 15 weeks.

**Algorithm** **Label**

* Set area to 0. Assign
* Get each customer’s total area of lawn. Input
* Multiply area by 0.1. Operation
* Multiply the multiple by 15. Operation

1. **Defining table:-**

**Input:-** the number of regular hours and overtime hours that the employee worked and the employee’s regular hourly wage.

**Output:-** employee’s after tax pay.

**Processing:-** bonus of 1.5 times regular pay for each overtime hour worked. Tax is 15% of the employee’s gross pay.

**Algorithm** **Label**

* Set sum to 0. Assign (store)
* For each employee
  + Get employee’s regular hours Input
  + Get employee’s overtime hours Input
  + Get employee’s regular hourly wage. Input
* Add employee’s regular hours to sum. operations
* Add employee’s overtime hours to sum. operations
* Multiply overtime hours sum by 1.5. operations
* Add regular hours to sum to overtime hours sum by 1.5. operations
* Multiply sum by 0.15. operations

1. Which of the following are control structures? (Mark all that apply.)

b. computation

c. sequence

d. selection

e. repetition

f. try, catch, and throw