## SI@UCF: Java Course Homework Assignment: Farmer Kit

Kit's long lost uncle from Wyoming has recently given Kit a portion of his farm. Fortunately for Kit, he's got a long lost cousin Eric, (also from Wyoming), who's willing to help Kit with all the manual labor. Knowing that Kit is a savvy computer scientist, Eric wants him to help predict the profits they will earn from corn this year. In order to make sure that the field animals don't eat the corn, Eric will have to build a fence around the entire enclosure where the corn will be grown. He must pay for the fence, by the foot. However, the corn grown will yield a profit, dependent on the size of the enclosure allocated for growing the corn. Kit already happens to know that the way to maximize the area of an enclosure given a certain amount of fence is to build a circular enclosure. Your job is to help Kit write a program to determine how much profit the corn will yield.

In order to complete this task, you must prompt the user for the following pieces of information:

- a) The length of fence bought. (use an int)
- b) The price of the fence per foot. (use a double)
- c) The profit (in dollars) of growing corn on one square foot. (double)

(Note: The actual profit will be the profit made on the corn minus the cost of the fence.)

Using this information, you are to write out a statement of the following format:

Farmer Kit will earn \$XX.XX growing corn this year.

where XX.XX represents a real number representing the profit earned.

To improve your program, if there is a negative profit, (which means a loss), output a statement of the following format instead:

Farmer Kit will lose \$XX.XX growing corn this year.

If no money is earned or lost, follow the first format given. No need to format your output to a particular number of decimal places, but if you would like to learn how to do that, read section 2.9 in the text or ask a TA. (I'll cover this eventually in class also.)

## Sample Run 1 (User input in bold italics)

How long is the fence you bought? 100 What is the price of the fence per foot? 3.49 How much do you earn for growing 1 sq. ft. of corn? 10.50 Farmer Kit will earn \$8006.63 growing corn this year.

(Note: If you don't format your double for this example, the value printed out will be 8006.634512324505)

## Sample Run 2 (User input in bold italics)

How long is the fence you bought? **1000** What is the price of the fence per foot? **350.00** How much do you earn for growing 1 sq. ft. of corn? **1.25** Farmer Kit will lose \$250528.16 growing corn this year.

(Note: If you don't format your double for this example, the value printed out will be 250528.1605675654... also, this example shows that Kit shouldn't quit his day job!!!)