Lab Assignment 3

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CPSC1150 - Section 1

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Exercise Title: College Tuition Lab

Date submitted:June 2, 2014

Department: CPSC

**Program Quadratic Formula**

File Name: Lab3.java

Purpose: To calculate the number of years and months you can pay for college with an

initial balance.

Input: number (double or int) iBalance.

Output: number of months/years that you can pay for school.

Technical Information:

Compiler: Java SDK 1.7

Computer: Intel Celeron 2955U 1.4GHz, 2.00 GB of RAM

Language: Java

Source Code:

Attached

Program Logic (Pseudocode)

(definitions)

interest = 1.006 (0.6%)

START

1. iBalance = input
2. years, days = 0
3. while balance > 0
   * iBalance = iBalance \* interest
   * iBalance = iBalance - 500
   * months = months + 1
4. years = months / 12
5. months = remainder(months/12)
6. if years = 0

if months > 1

print month

else

print months

1. else if years = 1

if months > 1

print year, month

else

print year, months

1. else

if months > 1

print years, month

else

print years, months

END

**Test Cases:**

Finding the number of months/years you can pay for tuition with an initial investment at 0.6%/month interest

Test Case 1:

Input: iBalance = 500

Returns: 2 months

Test Case 2:

Input: iBalance = 250.02

Returns: 1 month

Test Case 3:

Input: iBalance = 4600

Returns: 1 year and 1 month

Test Case 4:

Input: iBalance = 9999.99

Returns: 23 years and 8 months

Test Case 5:

Input: iBalance = 10500

Returns: You get infinite money! Congrats!