Lab Report 4

# Problem

We need to be able to ask the user for an initial velocity and a time (in seconds) in order to calculate the final velocity and the distance the ball travels.

# Proposed Solution

The solution:

Make a final variable for acceleration since it doesn’t change.

Ask the user for the initial velocity.

Ask the user for the time (in seconds).

Calculate and print the final velocity using the proper formula.

Calculate and print the total distance using the proper formula.

# Tests and Results

I used the same numbers as the example and got the same solutions.

# Problems Encountered

The problems I encounters were figuring out how to do the calculations in code.

# Conclusions and Discussion

The lab was a success. The other way I could see completing the program would be to not use the final variable but instead just plugging in 9.8 whenever acceleration would be needed in the calculations.

# Additional Questions

How should the programmer decide if a value must be stored as a constant or a variable?

Depending on whether the variable is always the same or can be changed.

What are some of the problems that might arise if integers were used to solve this problem(S)?

The data would be less accurate.