Background:

In your Lab Assignments and Projects, you have been utilizing built in C++ functions. These functions have been provided to you by libraries—e.g., `<cmath>` includes the pow() and sqrt() functions. The syntax of these built in functions have been provided during lecture and during lab.

Take for example, the power function. To call the power function, you would type `pow( base, power )`. In this case, `base` is a number that is to be raised to a `power`.

In this assignment, the `main()` function is complete. Your task is to complete a selected group of functions. When these functions are complete, you will have a fully functioning application.

Description:

The assignment for this week is a projectile motion game. You have been provided with an incomplete program. If you run the program, you will experience the following:

- It is impossible to play more than 1 round.
- The round summary message is incomplete.
- The velocity summary message is incomplete.

Your task is to implement the missing features as detailed in the Instructions section.

Instructions:

1. Read this prompt **COMPLETELY** before writing any code.
2. **DO NOT** modify the main function.
3. **DO NOT** modify any functions other than those explicitly listed below.
4. Complete the `readYesNo` function.
   a. Prompt the user to Continue
   b. Read the user input
5. Complete the `printRoundSummary` function.
   a. Complete the cout statement
      i. See Sample output
      ii. Utilize the provided variables.
   b. Your output should match the sample output.
   c. Use the formatting functions and flags from the `<iomanip>` library.
6. Complete the `printVelocitySummary` function.
   a. Print “velocity_m” with the label “Initial Speed.”
   b. Print “velocity_e” with the label “Elevation.”
7. On a sheet of scratch paper, integrate the following functions
   a. \( \ln x \)
   b. \( x \)
   c. \( 5 \)
   d. \( x^2 \)
8. Do not complete step 7.
Round 1

The target is located 441.71 meters away.

Enter the launch speed (m/s): 100
Enter the angle of elevation: 32

Point of Impact: 915.95
Position of Target: 441.71
Difference: 474.23
Result: Miss

Initial Speed: 100.00 m/s
Elevation: 32.00 deg

Would you like to play again? (y/n): y

Round 2

The target is located 441.71 meters away.

Enter the launch speed (m/s): 100
Enter the angle of elevation: 45

Point of Impact: 1019.37
Position of Target: 441.71
Difference: 577.65
Result: Miss

Initial Speed: 100.00 m/s
Elevation: 45.00 deg

Would you like to play again? (y/n): n

Summary

Name: Thomas Kennedy
Rounds: 2
Hits: 0 of 2
Words: 333
Score: 0.00