PHYSICS NAME _____
LAB: REACTION TIME DATE _____ PERIOD _____

Title: Reaction Time

Purpose: To compare your actual reaction time with the reaction time necessary to catch a dollar bill which is dropped lengthwise between your thumb and second or middle finger, with thumb and finger placed at the halfway point (on George Washington's nose).

Equation: $d = v_i t + 1/2\ at^2$ >>> $d = 1/2at^2$ >>> $t^2 = 2d/a$ >>> if $a = g$ >>>

Procedure and Data:
1. Place vertically held meter stick between thumb and second or middle finger so that thumb or finger is on 70 cm mark (100 cm at top of stick). Have second person hold stick at top and drop it. Catch stick and note new position of fingers to nearest whole cm. Record distance meter stick dropped in table below. BE SURE FINGERS DO NOT MOVE VERTICALLY WHEN CATCHING STICK!

2. Repeat step 1 four more times. Calculate average distance to nearest 0.1 cm and record.

3. Measure the length of a dollar bill to nearst 0.1 cm and divide it by 2 to determine the length of half a bill. Record in table below to nearest 0.1 cm.

4. Try to catch a dollar bill dropped in the manner shown in class. Record the number of succesful catches in 5 tries in the table below.

trial	distance meter stick dropped (cm)
1	
2	
3	
4	
5	
avg.	

Length of half of a dollar bill = _____cm

Number of successful catches in 5 tries = _____

Calculations:

1. Show a sample calculation for your actual reaction time. Use the average meter stick distance as d. Include units in both calculation and answer. Express answer to nearest 0.01 s.

2. Show a sample calculation for the reaction time necessary to catch a dollar bill. Use the length of half a dollar bill as d. Include units in both calculation and answer. Express answer to nearest 0.01 s.

Conclusion:
My actual reaction time was _____ sec. The reaction time necessary to catch a dollar bill in the manner we dropped it is _____ sec. I successfully caught the dollar bill _____ times out of 5.