MEASUREMENT OF "g" (Using a falling ball)

PHYSICS 121
(I-121-C-a Rev 9-27-12)

INSTRUCTIONS:
(1) Retrieve the ball from the container at the bottom of the apparatus.
(2) Place the container where the ball will land.
(3) Place the ball in the release mechanism at the top of the apparatus.
(4) Reset the timer by pressing the "Reset" button.
(5) Press the plunger to release the ball. (See "Hint a")
(6) Repeat until you have repeatable values and average them to get your time interval.
(7) Measure the distance the ball falls. (See "Hint b")

HINTS:
(a) For best results press the plunger "BRISKLY" rather than slowly. The timer starts when the ball is released
and stops when it touches the bottom spring contacts.
(b) Take care to measure the distance that the center of mass of the ball falls. The mathematics applies to a
point mass. Measure the height the ball falls by measuring from the center of the ball while in its' holder to
the center of the ball when it just touches the springs below.
(c) Note that the timer measures seconds. The smallest number recorded is a microsecond--.000001 sec.