Lab 7 Ballistic Pendulum Data

Mass of brass ball: 0.0633 kg

Mass of pendulum: 0.1867 kg

Part I—Kinematic Measurement of Speed

Run #	D	d
1	241.0 cm	95.7 cm
2	241.5 cm	95.7 cm
3	240.5 cm	95.7 cm
4	240.0 cm	95.7 cm
5	242.0 cm	95.7 cm

Table 1: horizontal distance D and vertical distance d

Part II—Ballistic Pendulum Part I (simple pendulum)

Run #	h
1	12.2 cm
2	12.7 cm
3	13.3 cm
4	12.5 cm
5	13.6 cm

Table 2: height of pendulum h, where $h = h_2 - h_1$

Part III—Ballistic Pendulum Part II (physical pendulum)

$a = 29.8$ cm
$b = 25.3$ cm
$H_1 = 3.9$ cm

Run #	H_2	H
1	17.0 cm	13.1 cm
2	17.4 cm	13.5 cm
3	17.2 cm	13.3 cm
4	17.8 cm	13.9 cm
5	17.6 cm	13.7 cm

Table 3: height of pendulum above base H_2 and max vertical displacement H

Run #	time
1	16.52 s
2	16.61 s
3	15.95 s
4	16.74 s
5	15.69 s

Table 4: time for 15 periods