

## Raw Data Sheet

Student Name: \_\_\_\_\_

Team members:

1.- \_\_\_\_\_ 2.- \_\_\_\_\_

3.- \_\_\_\_\_ 4.- \_\_\_\_\_

Instructor: \_\_\_\_\_

### Ballistic Pendulum

Pendulum plus Steel ball masses,  $m_p + m_b$  311.8 (g)

Pendulum mass,  $m_p$  245.9 (g)

Center of mass length,  $r_{cm}$  28.6 (cm)

Table 1.-  $\theta$  (deg) for various trials

Range	Trial 1	Trial 2	Trial 3
Short	16.5	16.5	16.5
Medium	21.5	21.5	21.5
Large	37.5	37.5	37.5

### Angular Collision

Outer hoop radius,  $r_{h,outer}$  12.6/2 (cm)

Inner hoop radius,  $r_{h,inner}$  10.9/2 (cm)

Hoop mass,  $m_h$  1422.1 (g)

Disk radius,  $r_d$  22.8 (cm)

Disk mass,  $m_d$  1478.3 (g)

Table 2.- Rotational Frequency,  $f$  (RPM), for various trials

	Trial 1	Trial 2	Trial 3
$f_{initial}$	2524	2360	2620
$f_{final}$	1628	1500	1668

Note: Remember to divide  $f$  by ten – refer to page 46 in the lab manual.