

## Raw Data Sheet

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

Team members:

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

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

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

### Spring Constant

Record the relaxed length  $l_0$  : \_\_\_\_\_ (cm)

Table 1: Rows top to bottom represent mass and length of the spring, respectively.

m (g)					
$l$ (cm)					

### Kinematics

Record the frequency of the sparks : \_\_\_\_\_ (Hz)

Record the equilibrium distance,  $r_0$  : \_\_\_\_\_ (cm)Record the Puck's mass,  $m_p$  : \_\_\_\_\_ (kg)

Table 1.- Raw data: point's index along each track;  $r$  is the distance between the paths, measured between points with the same index;  $x$  is the distance between mass center points.  $\Delta a$  and  $\Delta b$  are the distances between every third point along each track;

**Note: time = index/spark frequency**

Raw data					Data Analysis								
Index	$r$ (cm)	$x$ (cm)	$\Delta a$ (cm)	$\Delta b$ (cm)	time (s)	$v_{C.M.}$ (m/s)	$v_a$ (m/s)	$v_b$ (m/s)	$\frac{1}{2}m_p v_a^2$ (J)	$\frac{1}{2}m_p v_b^2$ (J)	$\frac{1}{2}m_p(v_a^2 + v_b^2)$ (J)	$\frac{1}{2}(r - r_0)^2 k_s$ (J)	$E$ (J)
0		NA	NA	NA									
3													
6													
9													
12													
15													
18													
21													
24													
27													
30													
33													
36													
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66													