## Experiment 3: Collisions

## Part 3C- Rotational Coupling Collision

Name	Partner		Date			
Mass of Disk	of Disk		Radius of Disk			
Calculate the rotational inertia of the disk about an axis thru its center perpendicular to its surface:						
Mass of Ring		Inner and outer radii of Ring				
Calculate the rotational inertia of the ring about an axis thru its center perpendicular to its surface:						
Sketch graph of angular velocity identify regions BEFORE, DURING, a	vs time ( $\omega$ vs and AFTER the co	t) and ollision.	Initial angular	velocity, $\omega_i$		
			Final angular v	elocity, $\omega_f$		
Compute the initial and final angul	ar momentum					

## Experiment 3: Collisions

## Part 3C- Rotational Coupling Collision

Name	Partner	Date			
Write a statement discussing whether you observed the angular momentum of this system to be conserved					
Compute the initial and final kinetic energy of the system					
Write a statement discussing whether you observed the kinetic energy of this system to be conserved					
Compute the ratio $K_f/K_i$ and compare to the theoretical result $I_{DISK}/(I_{DISK} + I_{RING})$ using the formula you derived in the prelab.					
Attachments:					
Annotated graph showing the angular velocity versus time plot of experimental data.					
Annotated graph showing the angular velocity versus time plot from the simulation.					