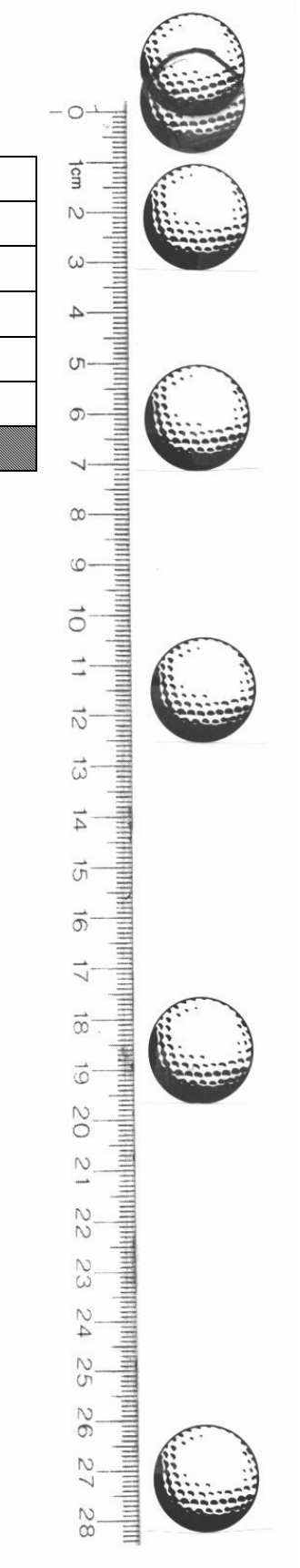
Lab Report: Falling Ball **Name** _____

In physics, "free-fall" means –

ball #	total t (s)	total d (cm)
0	0	0
1	0.040	
2		
3		
4		
5		
6		

$d_{instant}$ (cm)	$v_{instant}$ (cm/s)
0	0
$d_2 - d_0 =$	$d_{in}/0.080s =$
$d_3 - d_1 =$	$d_{in}/0.080s =$
$d_4 - d_2 =$	$d_{in}/0.080s =$
$d_5 - d_3 =$	$d_{in}/0.080s =$
$d_6 - d_4 =$	$d_{in}/0.080s =$



1. Follow the directions on the video to fill in total time and total displacement on the above data table. Then, make a graph of total time (x-axis) vs. total displacement (y-axis).

2. After your results from #1 are discussed on the video, follow the directions on the video to fill in instantaneous displacement and instantaneous velocity. Then make a graph of time (x-axis) vs. instantaneous velocity (y-axis). Draw a rise-run triangle and find the slope of the line.

$$slope = \frac{rise}{run} = \text{———} = \boxed{}$$