Lab: Motion – Datasheet, Part A   Name_____

These are the same directions as those on the video. Do each section only after that portion of the video has been shown.

Marking your tape -
   1) Lay your tape out on your table.
   2) Starting on the end labeled A, circle the first dot and label it 0.
   3) Count 10 dots and circle the 10th dot, labeling it 1.
   4) Label every 10th dot (2, 3, 4, etc.) until you reach the end.
   5) Below your data table, sketch the spacing of the dots.

Calculate the time -
   6) Record the time for each **circled** dot (Each dot on the tape took 0.20 s).

Measure total displacement -
   7) Record total displacement by measuring **from the zero dot** to each circled dot.

Calculate instantaneous displacement and velocity -
   8) Measure instantaneous displacement by measuring the distance between each circled dot and the very next dot (non circled).
   9) Divide the instantaneous displacement by the short time interval (0.20 s).

Construct graphs -
   10) Make two graphs of your data: Graph 1 – total time on x-axis and total displacement on y-axis, Graph 2 – total time on x-axis and instantaneous velocity on y-axis. Make a best-fit graph of each.

Data Table

(= instant. d/0.20s)

Dot #	Total Time (s)	Total Displacement (cm)	Instantaneous Displacement (cm)	Instantaneous Velocity (cm/s)
1				
2				
3				
4				
5				
6				
7				

Sketch the spacing of the numbered dots on the tape for Part A: