

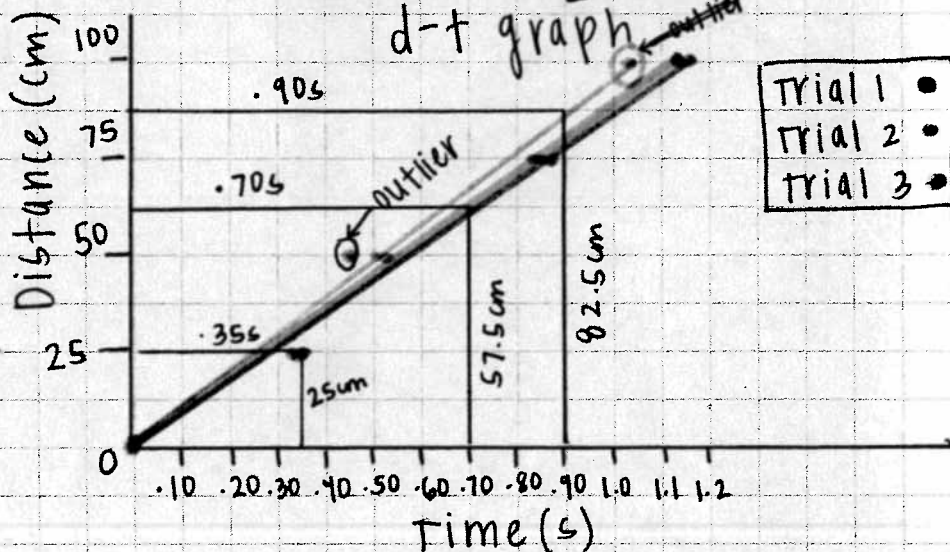
Uniform Motion

Determining the avg. speed of a marble while in uniform motion

Part 1:

Graph:

Time (s)	Speed (m/s)
4.73s	0.21 m/s
4.40s	0.22 m/s
5.30s	0.18 m/s
5.63s	0.17 m/s
5.50s	0.18 m/s
5.55s	0.18 m/s



Part 2:

Trial 1

Time (s)	Distance (cm)
0	0
.35	25
.52	50
.83	75
1.16	100

Trial 1: slope

$$\frac{25 \text{ cm}}{.35 \text{ s}} = 71.4 \text{ cm/s} = \boxed{70 \text{ cm/s}}$$

Trial 2: slope

$$\frac{57.5 \text{ cm}}{.70 \text{ s}} = 82.1 \text{ cm/s} = \boxed{80 \text{ cm/s}}$$

Trial 3: slope

$$\frac{82.5 \text{ cm}}{.90 \text{ s}} = 91.7 \text{ cm/s} = \boxed{90 \text{ cm/s}}$$

Trial 2

Time (s)	Distance (cm)
0	0
.35	25
.50	50
.84	75
1.03	100

Trial 3

Time (s)	Distance (cm)
0	0
.34	25
.44	50
.87	75
1.14	100

Results:

$$\frac{70 + 80 + 90}{3} = \boxed{80 \text{ cm/s}}$$

$$\boxed{y = 80x}$$

$$\boxed{d = 80t}$$