

ETS Motion Lab

(Sample Data, Calculations & Graph)

Data Table:

Event	Distance (m)	Time (second)
Hop		
1	9 m	3.17 s
2	9 m	3.82 s
3	9 m	3.51 s
Average	9 m	3.5 sec
Skip		
1	9 m	4.54 s
2	9 m	4.84 s
3	9 m	4.42 s
Average	9 m	4.6 sec
Jog		
1	9 m	2.74 s
2	9 m	2.25s
3	9 m	2.51 s
Average	9 m	2.5 sec
Crawl		
1	9 m	7.67 s
2	9 m	7.79 s
3	9 m	7.94 s
Average	9 m	7.8 sec

Calculations:

Hop: avg. speed = $\frac{D_f - D_i}{T_f - T_i}$ or $s = d/t$ (you can use either version of the speed formula since D_i and T_i are both zero)

$$= \frac{9\text{m} - 0\text{m}}{3.5\text{ s} - 0\text{ s}}$$

$$= \frac{9\text{m}}{3.5\text{ s}}$$

$$= 2.6\text{ m/s} \text{ (average speed for hopping)}$$

Do the same for the other motion types

Distance vs. Time Graph (SPEED GRAPH) (Hop, Skip, Jog, and Crawl)

