Jason, Liam, Charles
Physics 31 Lab 1

Book

$\Delta V = \text{sqrt}\,[wh * \Delta l]^2 + (hl * \Delta w)^2 + (lw * \Delta h)^2$
$= (lwh) * \text{sqrt}[(\Delta l / l)^2 + (\Delta w / w)^2 + (\Delta h / h)^2]$

	Jason	Liam	Charles
Book Length	21 cm	42 cm	
Book Width	14.5 cm	29 cm	
Book Height	2.2 cm	4.4 cm	
Book Volume	669.9 cm^3	381.83 cm^3	6.09 x 10^{-4} m^3
Book Δ Volume	70.36 cm^3	31.8 cm^3	1.3 x -5 m^3

Eileen Swimmer:

Liam:

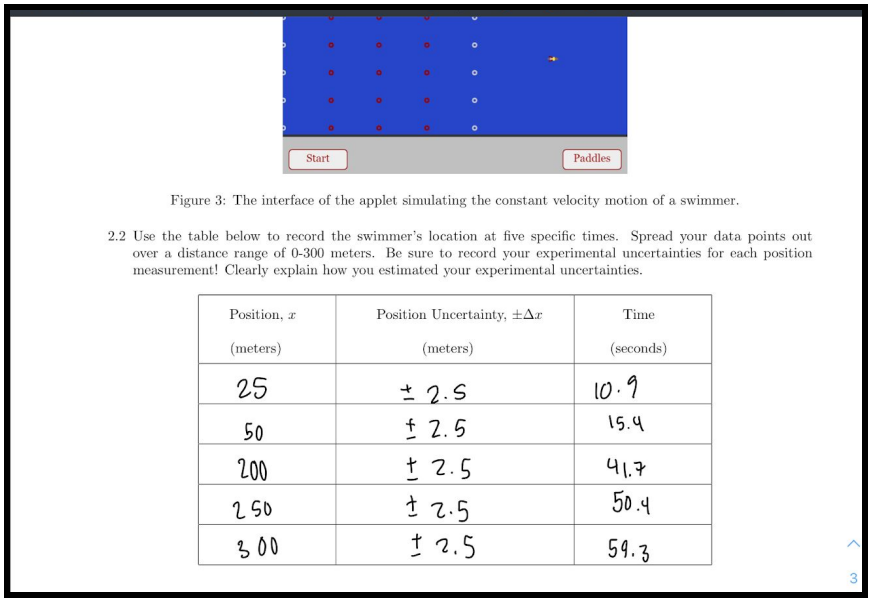
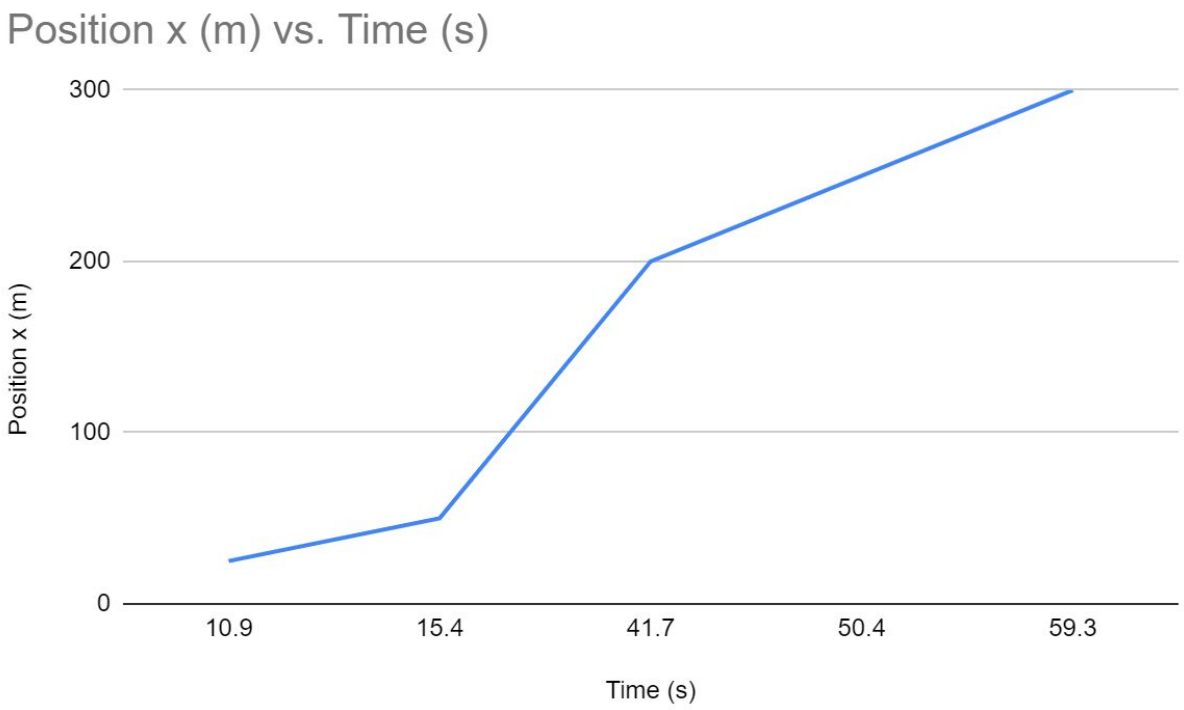


Figure 3: The interface of the applet simulating the constant velocity motion of a swimmer.

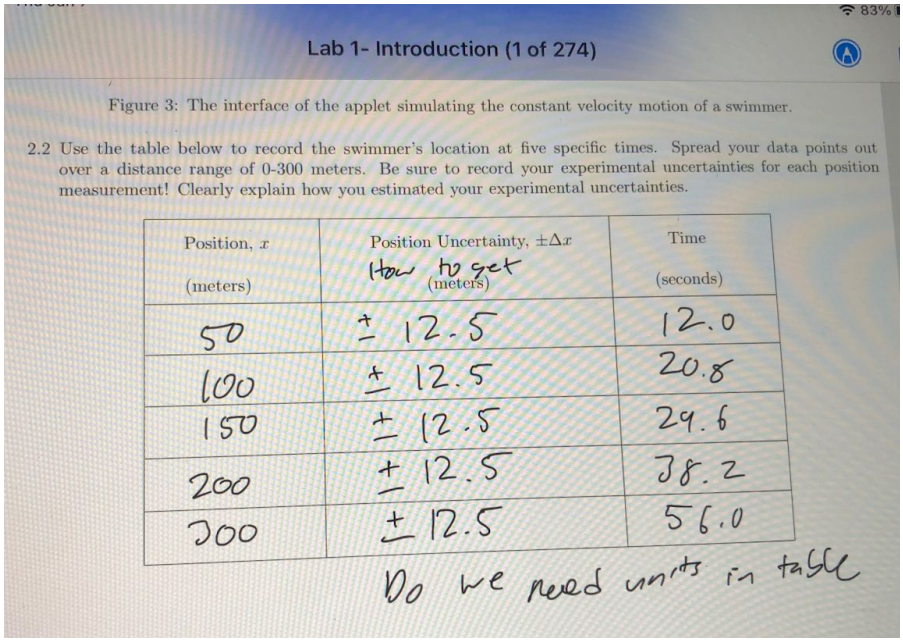
2.2 Use the table below to record the swimmer's location at five specific times. Spread your data points out over a distance range of 0-300 meters. Be sure to record your experimental uncertainties for each position measurement! Clearly explain how you estimated your experimental uncertainties.

Position, x (meters)	Position Uncertainty, $\pm\Delta x$ (meters)	Time (seconds)
25	± 2.5	10.9
50	± 2.5	15.4
200	± 2.5	41.7
250	± 2.5	50.4
300	± 2.5	59.3

3



Charles:



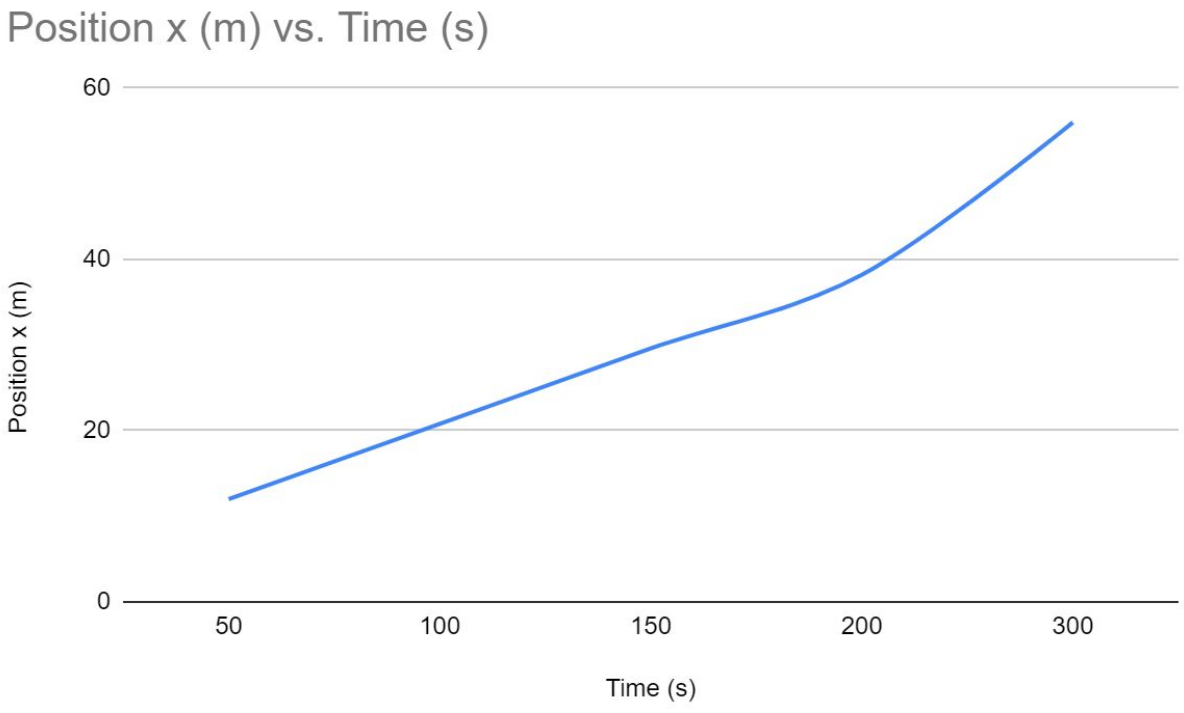
Lab 1- Introduction (1 of 274)

Figure 3: The interface of the applet simulating the constant velocity motion of a swimmer.

2.2 Use the table below to record the swimmer's location at five specific times. Spread your data points out over a distance range of 0-300 meters. Be sure to record your experimental uncertainties for each position measurement! Clearly explain how you estimated your experimental uncertainties.

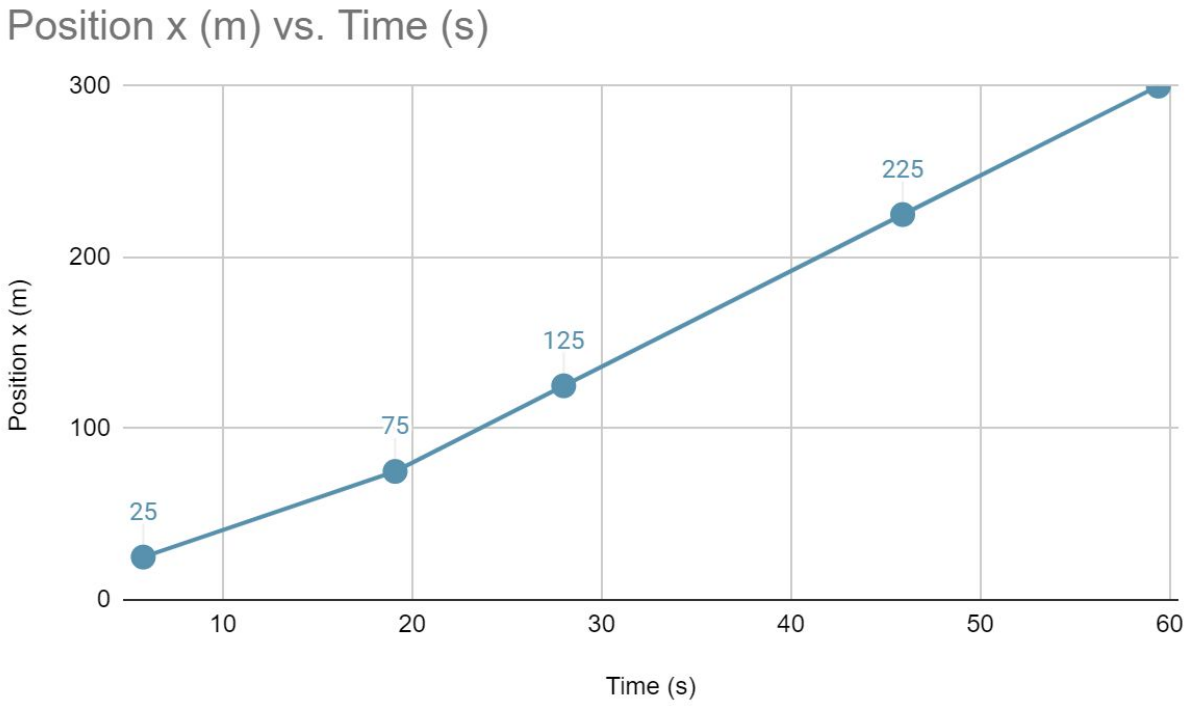
Position, x (meters)	Position Uncertainty, $\pm\Delta x$ (meters) How to get	Time (seconds)
50	± 12.5	12.0
100	± 12.5	20.8
150	± 12.5	29.6
200	± 12.5	38.2
300	± 12.5	56.0

Do we need units in table



jason:

Position x (m)	Time (s)	Position Uncertainty (+/-△x)
25 m	5.8 s	3.12
75 m	19.1 s	3.12
125 m	28 s	3.12
225 m	45.9 s	3.12
300 m	59.4 s	3.12



The y -intercept basically is the starting point for Eileen as she begins swimming against the current. Judging from the simulation, it appears that she is at least 25 m away from the 0 m mark thus I can conclude that my results are sensible as she starts from that point and goes swims faster through the water as time accumulates. This suggests a direct relationship between the position x (m) over the time (s).