

Lecture 2 --- Displacement, velocity, and acceleration

1. Review on line quiz
2. Peer instruction
3. Class announcements
4. Displacement
5. Velocity
6. Acceleration

Review of on line quiz

1. Suppose that you have 2 minutes before class begins and you are 300 m from Olin 101. What is should be your average velocity (in m/s) in order to get to class on time?
(a) 150 (b) 15 (c) 5 (d) 2.5 (e) 1
2. Will you need to accelerate in order to get to class on time?
3. Will you need to decelerate?

Peer instruction question

Suppose you are jogging at constant speed ($v_{\text{you}} = 8 \text{ mi/h}$) around a circular track while I am jogging at constant speed around the same track ($v_{\text{me}} = 4 \text{ mi/h}$). In the time that it takes you to go around the track once, how many times will I go around the track?

- A. $\frac{1}{2}$ B. 1 C. 2 D. 4

Class announcements

Monday (Labor day) – we will have class. Tutorial schedule:

Olin 107 will be available 2 - 10 PM weekdays and on Sunday evenings for Physics Homework sessions. Network connections are available at most of the seats. Tutorials for PHY 113 will be scheduled in that room as listed below. Please address any questions or suggestions about the tutorial schedule or format to natalie@wfu.edu.

Schedule for PHY 113 tutorials in Olin 107 (starting Monday, Sept. 2, 2002)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
4-6 PM						
	7-9 PM	7-9 PM	7-9 PM	7-9 PM		

The tutors:

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Maritza Hobson <hobsma03@wfu.edu>

Bryan Stephens <stepbjl@wfu.edu>

Matt Rave <ravemjl@wfu.edu>

- Laboratories start Monday Sept. 2. Please see Machele Cable in Room 110 if you need to (re)register for lab section. (She will not be available on Monday.)
- Lecture notes available on the Web.
- Please see me if you have any questions about WebAssign. There will be ~1 problem set per lecture. 3 problem sets will be due Sept. 4th.

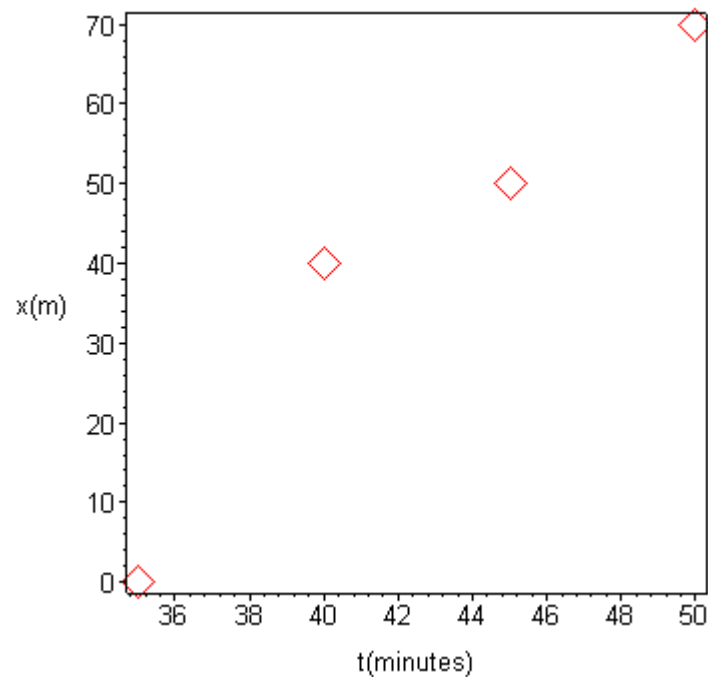
Displacement (position) versus time $x(t)$

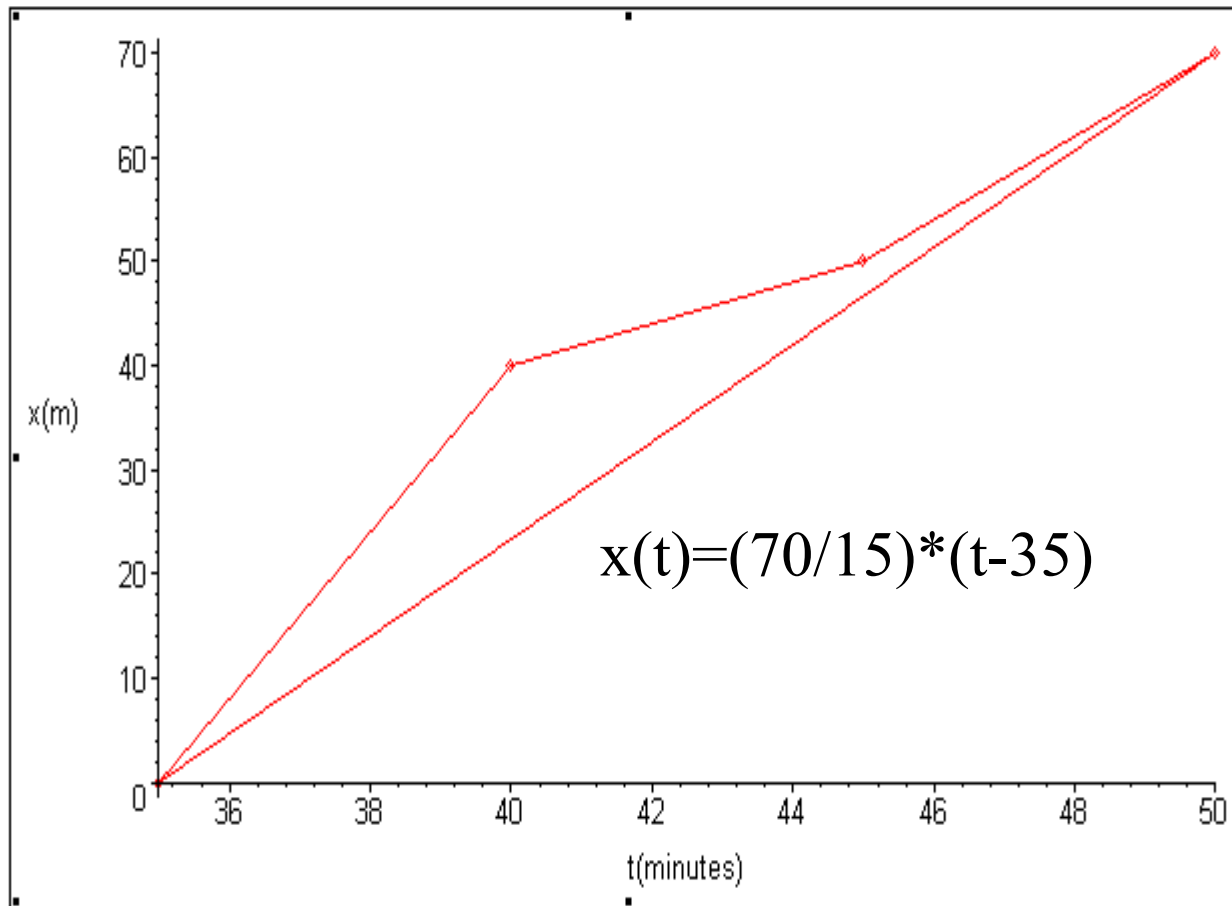
1. Table (schedule)
2. Graph
3. Analytic formula

1. Tablular form

Time	Position
9:35 AM	0 m Reynolda
9:40	40 m Benson
9:45	50 m Library
9:50	70 m Olin

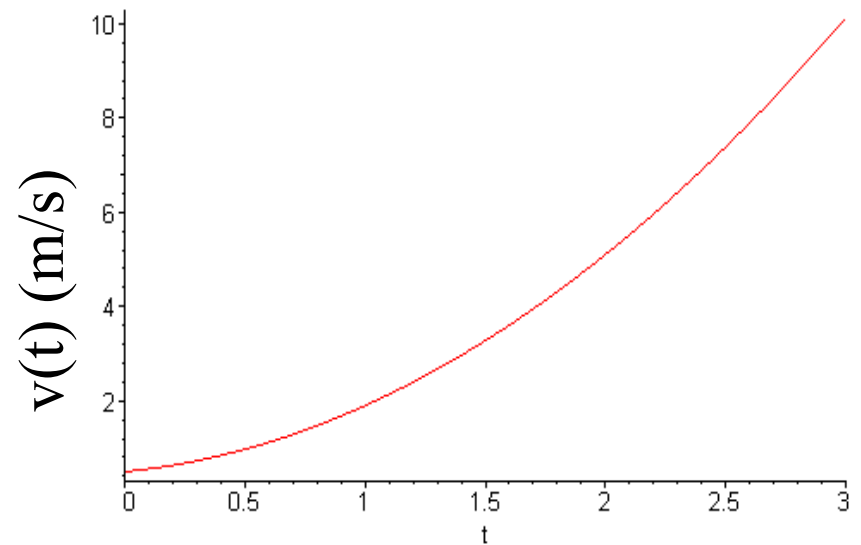
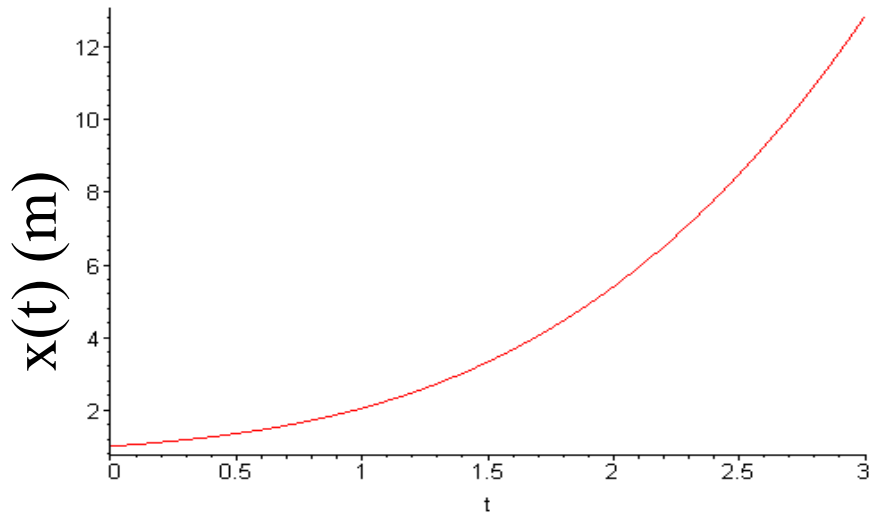
2. Graph





Velocity – rate of change in displacement

Instantaneous velocity: $v(t) = \frac{dx}{dt}$



Instantaneous acceleration – rate of change in velocity

$$a(t) = \frac{dv}{dt}$$