

READING ASSIGNMENT FOR AUGUST 28

SECTIONS 2.3 THROUGH 2.4

2.3 Instantaneous Velocity

- Instantaneous Velocity - velocity at one instant of time.
- From now on, when we say velocity, we only mean the instantaneous velocity. $\frac{\Delta x}{\Delta t}$ is now called the average velocity.
- Instantaneous velocity is still the slope of position-versus-time graph.
- Watch out for this procedure at the bottom of page 39. Even though the textbook does a numerical example, we rarely have enough information in our problems to get the correct value for velocity.
- Displacement is still the area under the velocity-versus-time graph.

2.4 Acceleration

- Acceleration - rate at which velocity changes.
- $a_x = \frac{\Delta v_x}{\Delta t}$ - Actually only true for constant acceleration motion. Luckily, that's the only type of problem we'll do.
- Unit of acceleration: $\frac{m/s}{s} = m/s^2$.
- Acceleration is the slope of the velocity-versus-time graph.
- The sign (and therefore direction) of acceleration is tricky. Read this carefully.