Monday, October 22/12
Science 10

Announcements

1. Test: Chapter 9 -> Some still haven't written

2. Understanding Concepts: **Page 388, #3-5, 7, 9, 10-13**

   *Page 388, #6, 8 - Optional

3. Speed-Time Graphs (Page 390)

4. Slope of Speed-Time Graph (Page 390)

---

5. Area Under the Line on a Speed-Time Graph (Page 391)

6. Understanding Concepts: Page 393 #2-6, 8, 11, 12

Quiz => Average Acc. Problems

- Thursday -

Oct. 25/12

$$a_{ave} = \frac{\Delta v}{t}$$

$$a_{ave} = \frac{v_f - v_i}{t}$$

#3. CAR A $6.25 \frac{km/h}{s}$

CAR B $13 \frac{km/h}{s}$

#4. $1.1 \frac{m}{s^2}$

#5. $32 \frac{m}{s^2}$

#7. a) $4.6 \frac{m}{s^2}$

X b) $\frac{4.6 \frac{m}{s}}{s}$ meaning acc.

#9. $-2.4 m/s^2$ $v_i$ $v_f = 0 m/s$

↑ slowed down X

#10. $4.9 m/s$

#11. $53 \frac{km}{h}$

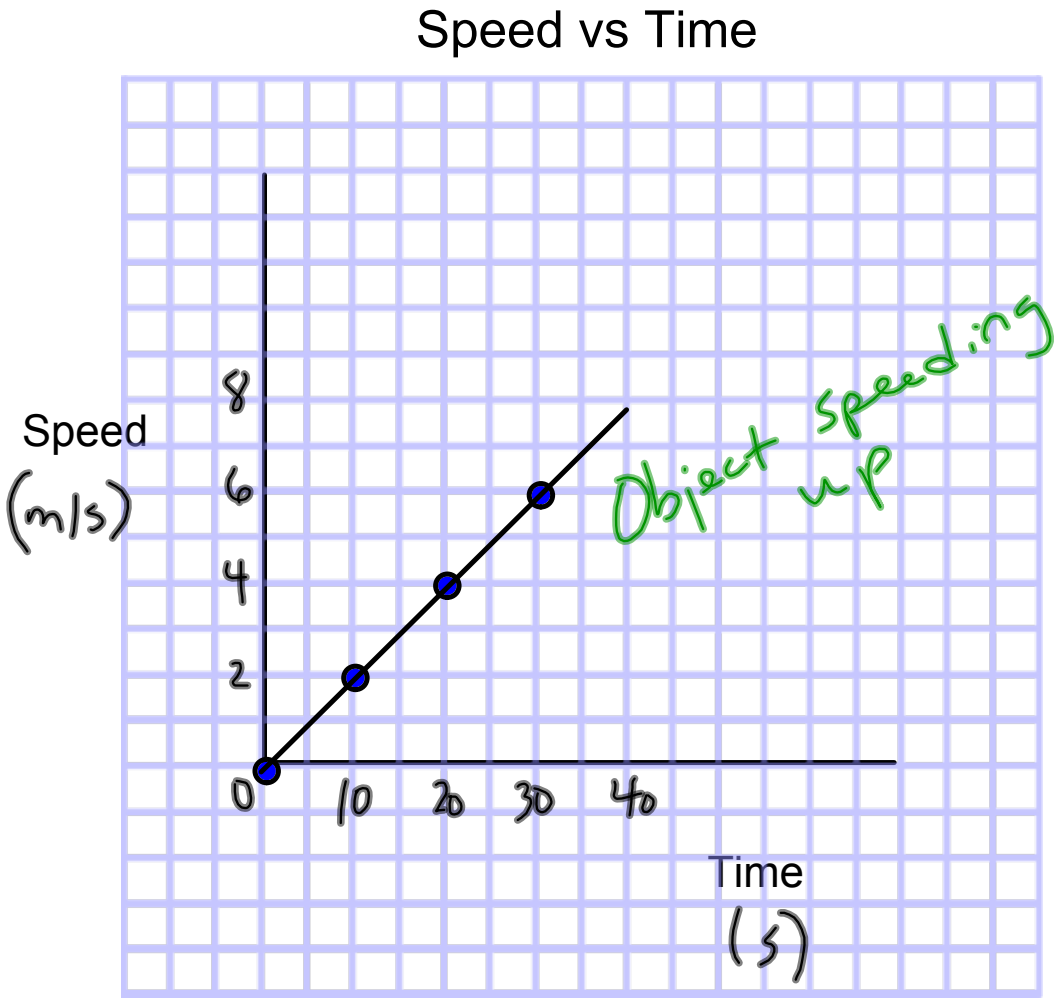
#12. $10 \frac{m}{s}$

#13. $0.62 s$

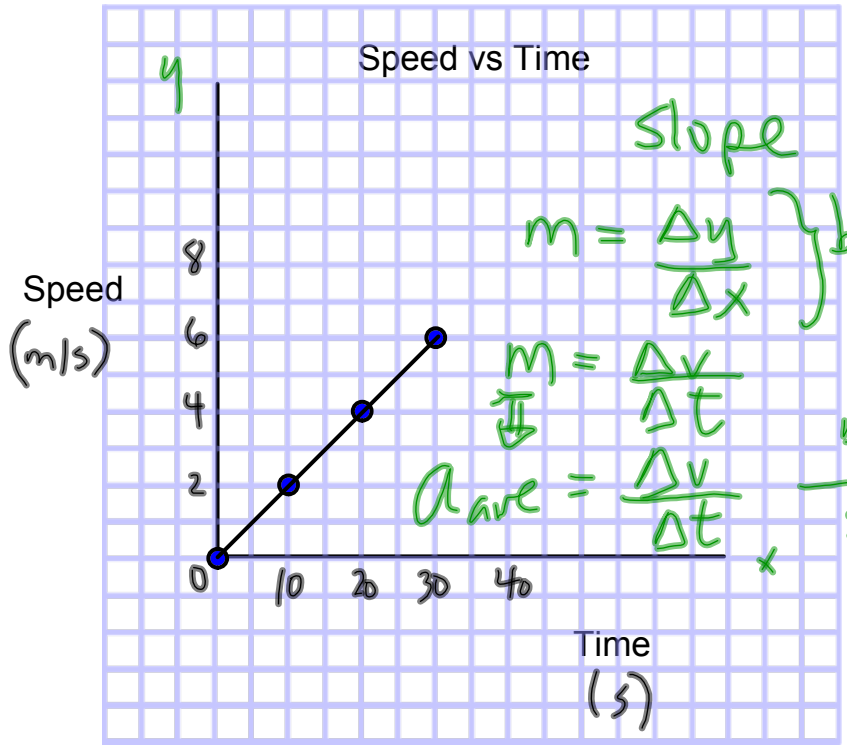
# Speed-Time Graphs
(Page 390)

| Time (s) | Speed (m/s) | (time, speed) |
|---|---|---|
| 0.0 | 0.0 | (0.0, 0.0) |
| 10.0 | 2.0 | (10.0, 2.0) |
| 20.0 | 4.0 | (20.0, 4.0) |
| 30.0 | 6.0 | (30.0, 6.0) |

⇒ (right, up)



# Slope of Speed-Time Graphs
(Page 390)




(0,0), (30.0, 6.0)

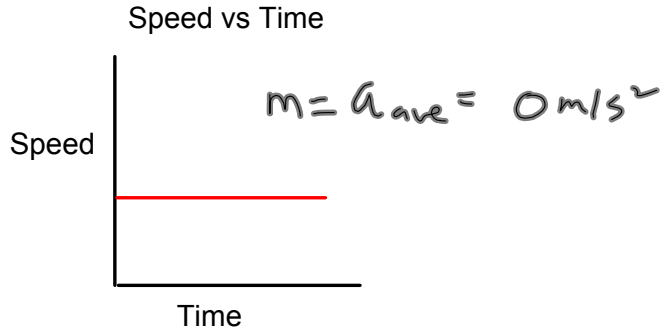
$(t_1, v_1), (t_2, v_2)$

$$a_{ave} = \frac{v_2 - v_1}{t_2 - t_1}$$

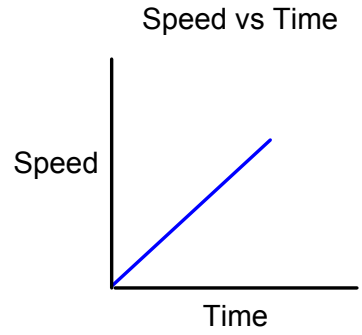
$$a_{ave} = \frac{6.0 - 0}{30.0 - 0} \ \frac{m/s}{s}$$

$$a_{ave} = 0.20 \ \frac{m}{s^2}$$

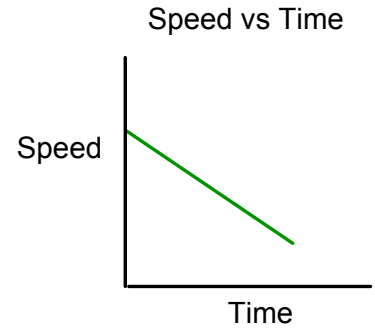
– speeding up –




zero slope - no acceleration - object is moving with constant speed




positive slope - positive acceleration - object speeding up




negative slope - negative acceleration - object slowing down