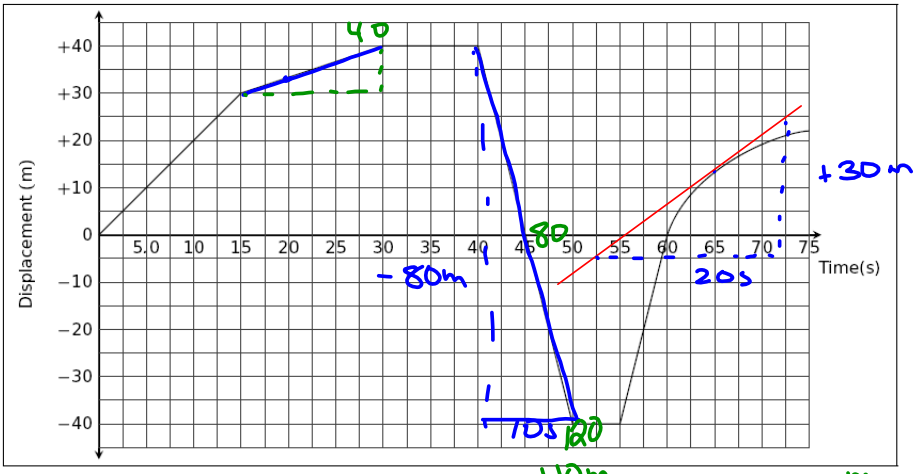
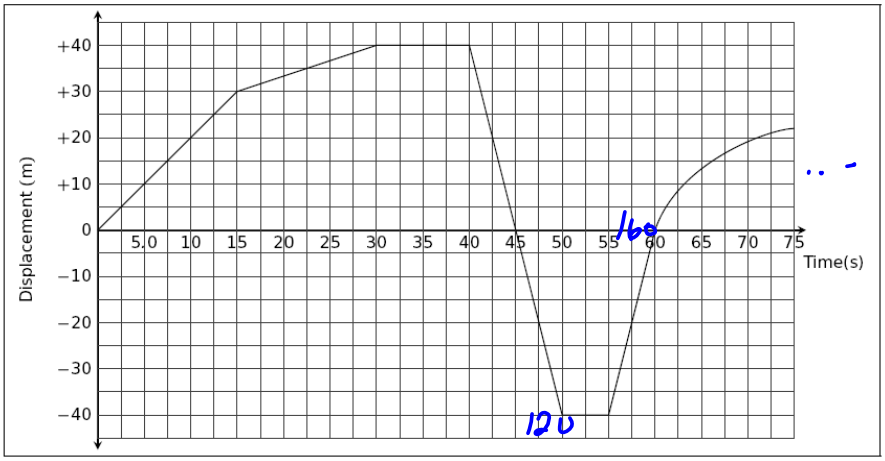
Motion Graph #4 - The following graph indicates the motion of an object along an North-South path.



1. What is the object's velocity at 20 s? Slope = $\frac{+10m}{15s}$ 1. $+0.67\frac{m}{s}$
2. What is the object's speed at 45 s? Slope = $\frac{-80m}{10s} = -8\frac{m}{s}$ 2. $8\frac{m}{s}$
3. What is the object's velocity at 65 s? 3. $+1.5\frac{m}{s}$
4. How far did the object travel in the first 50 s? 4. 120m

Motion Graph #4 - The following graph indicates the motion of an object along an North-South path.



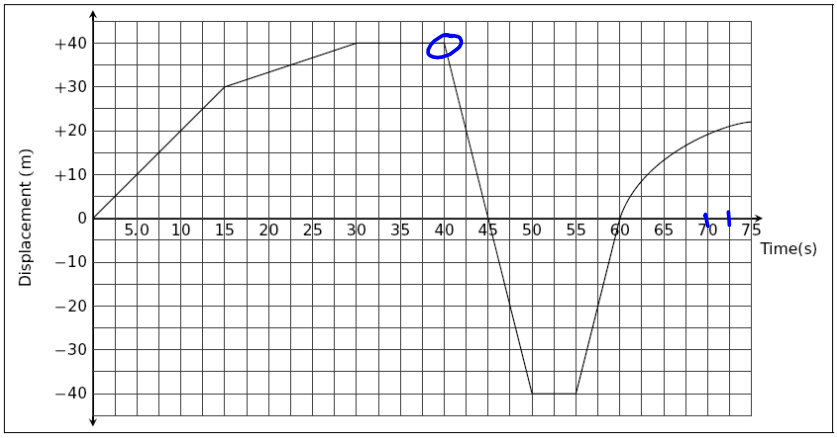
5. What was the object's displacement at 60 s? 5. ☺m

6. What is the object doing after the first 60 s 6. accelerating W, slowing down

7. What is the total distance travelled by the object? 7. 182m

8. What is the object's final displacement? 8. +22m

Motion Graph #4 - The following graph indicates the motion of an object along an North-South path.



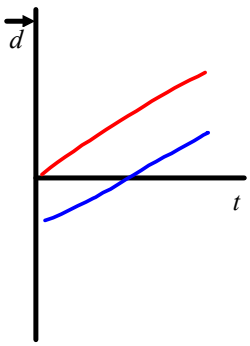
9. What is the average speed of the object up to 40 s? $d/t = \frac{40m}{40s}$ 9. $= 1.0\ m/s$

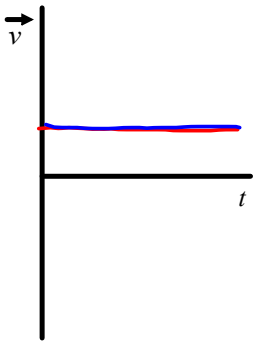
10. What is the object's average velocity up to 71 s? $d/t = +\frac{20m}{70s}$ 10. $+0.28\ m/s$

11. When is the object travelling ~~northward~~ ONLY? 11. 0-30, 55-75 s

12. When did the object change direction for the first time? 12. 40 s

d-t graphs compared to v-t graphs

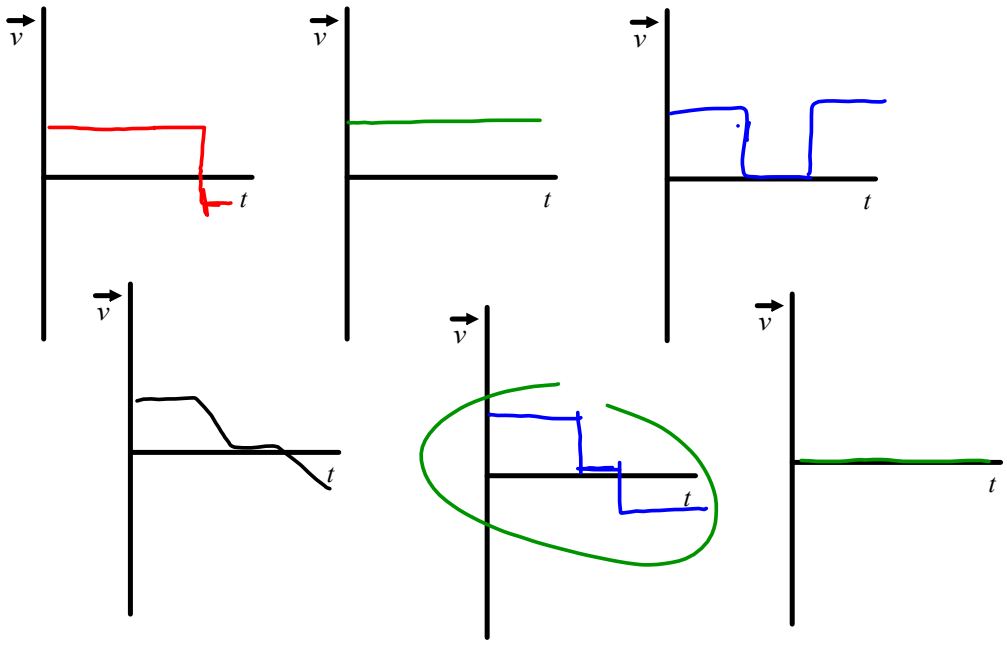




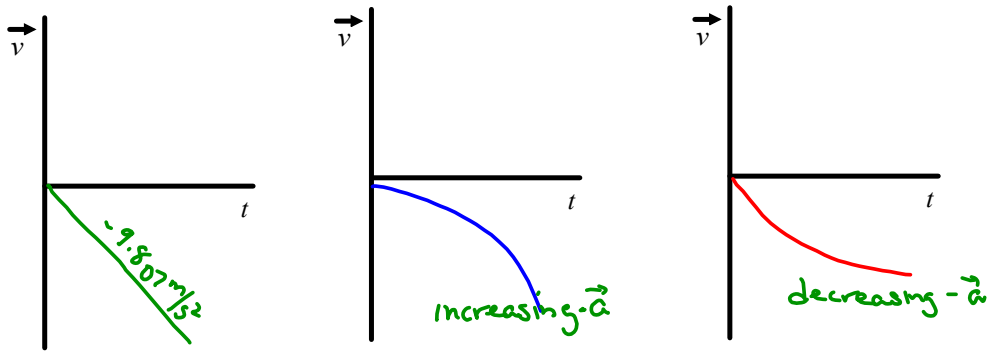
same? yes

We lose information about the starting point.

Velocity - Time Graphs



Further abuse of old physics text



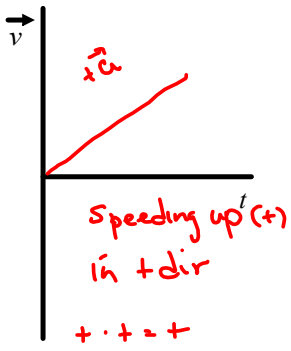
in Fredericton

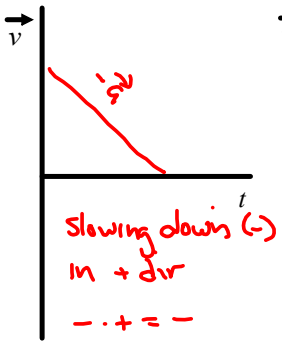
$g = 9.807 \frac{m}{s^2}$ (scalar)

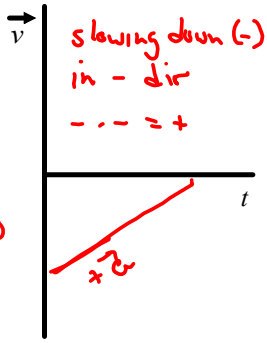
$\vec{a}_g = -9.807 \frac{m}{s^2}$

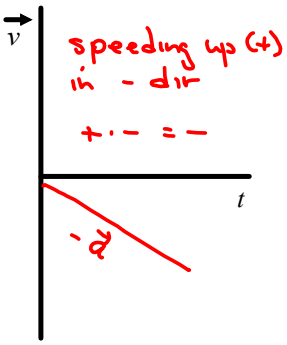
acceleration due to gravity $= 9.807 \frac{m}{s^2}$ downward $= -g$

Slope = acceleration

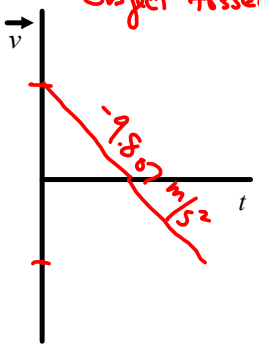


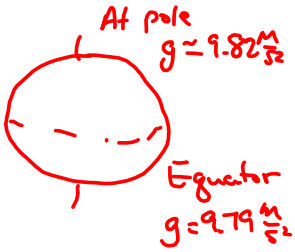






Object tossed in air





Textbook Reading: Section 2.4

Try the first v-t graph!