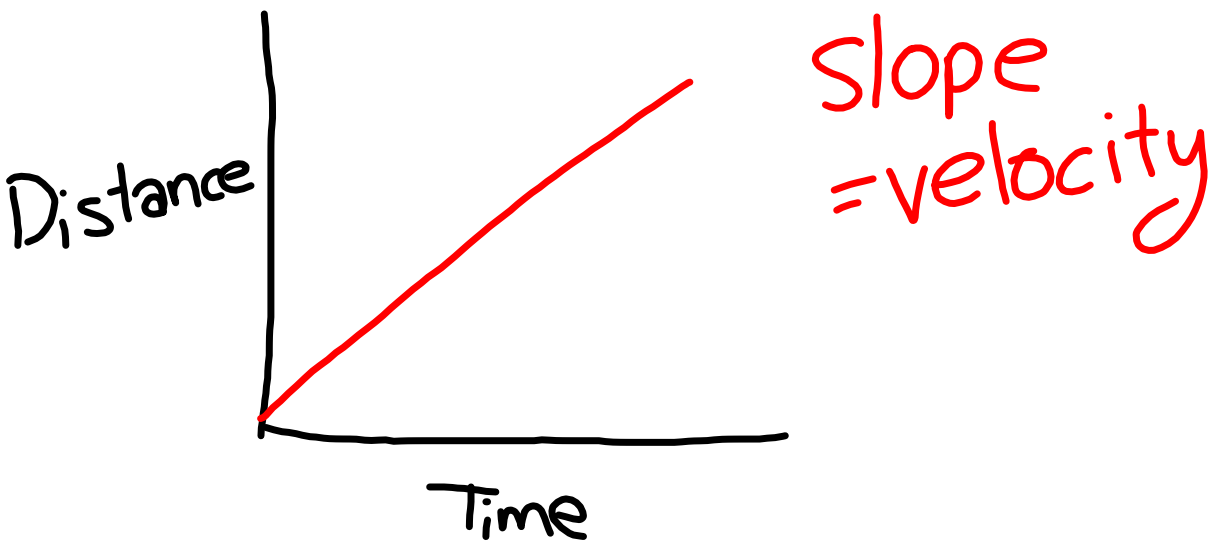
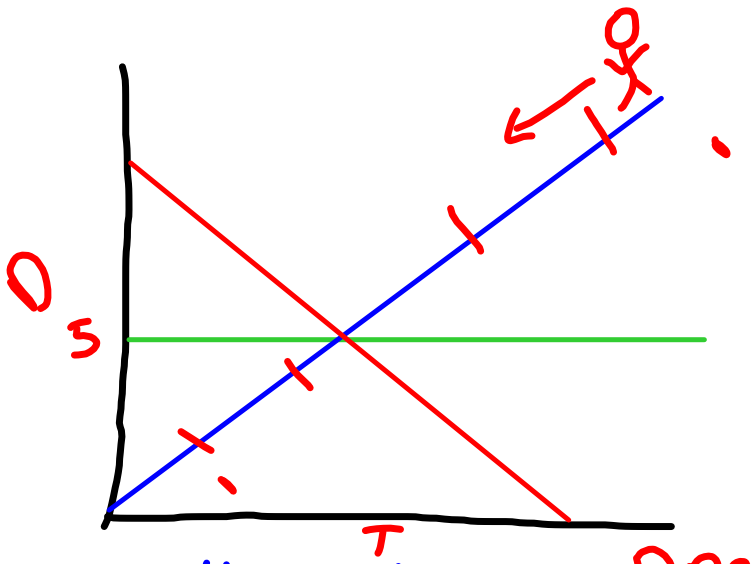
Distance vs Time Graphs



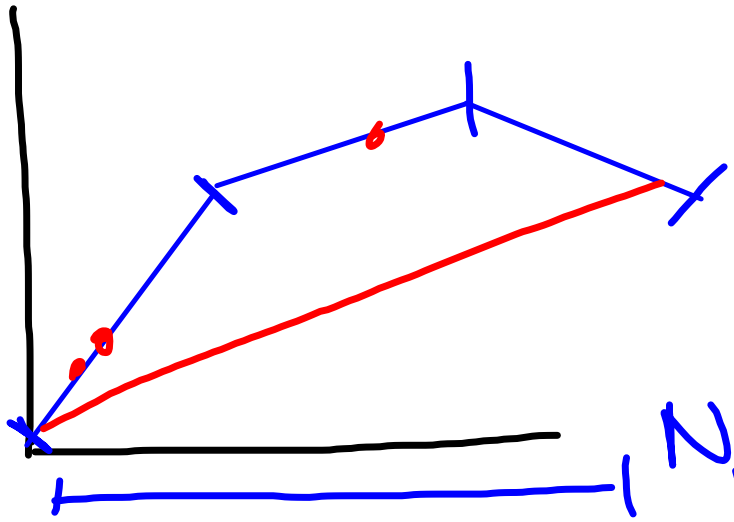
Distance vs Time Graphs



Slope = 0

positive slope

Negative slope

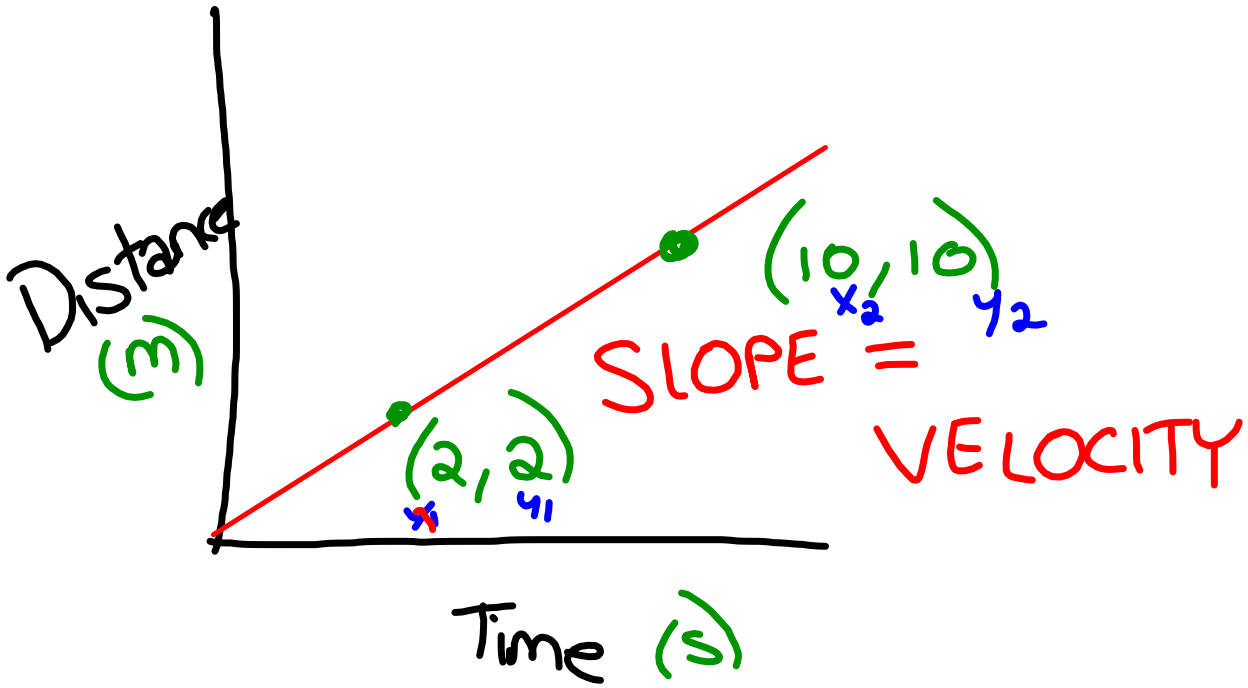


Non Uniform

Uniform = staying the same

constant

Distance vs Time Graphs



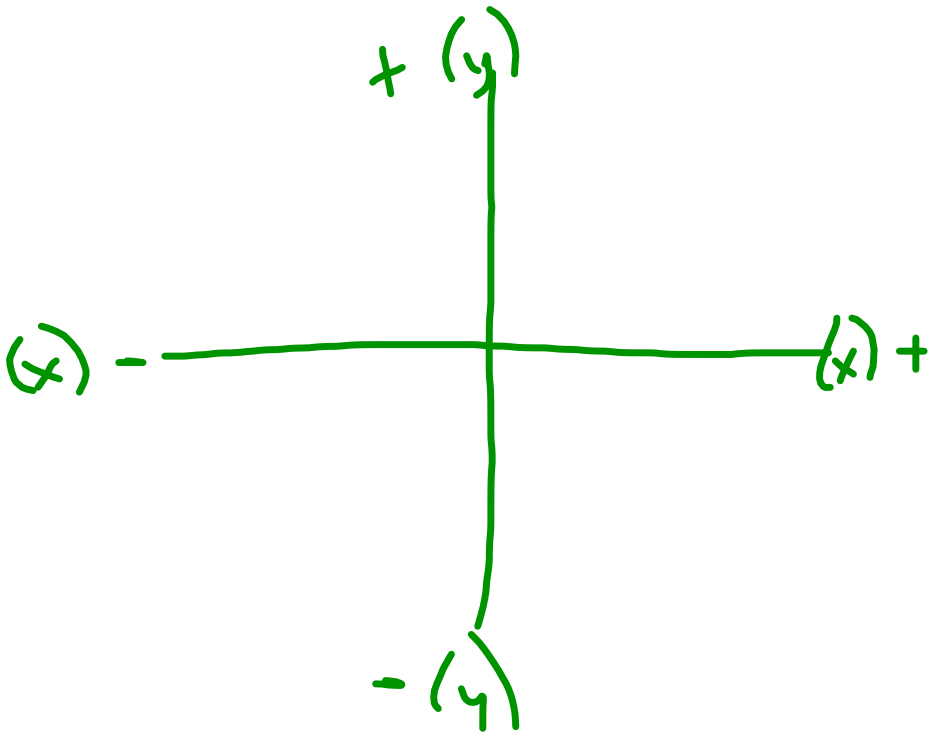
$$V = \frac{d}{t} \text{ (v)} \quad \text{in} \quad \frac{y\,axis}{x\,axis} \qquad \frac{10-2}{10-2} = \frac{8}{8}$$

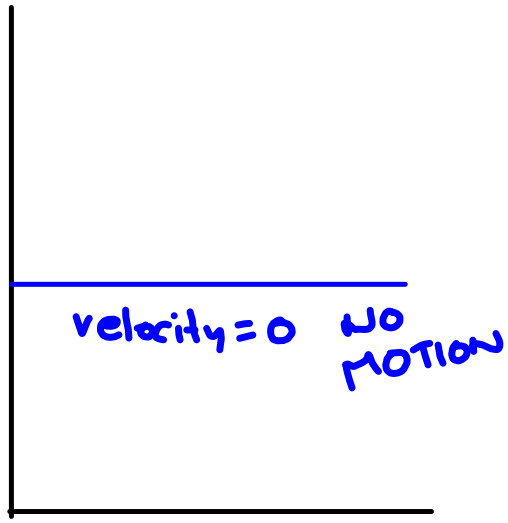
1 m/s

$$slope = \frac{y_2 - y_1}{x_2 - x_1}$$

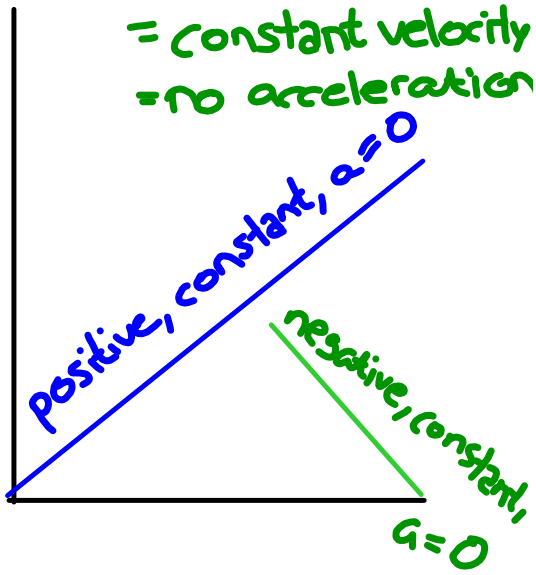
$$\frac{rise}{run}$$

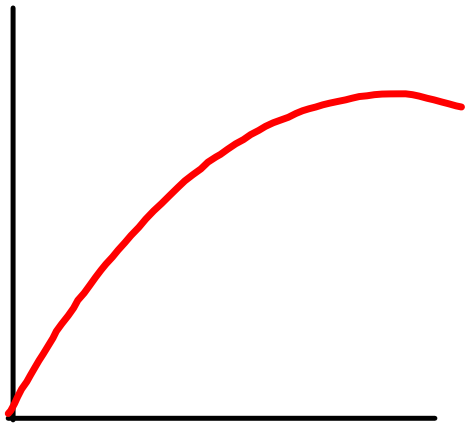
Distance vs Time Graphs





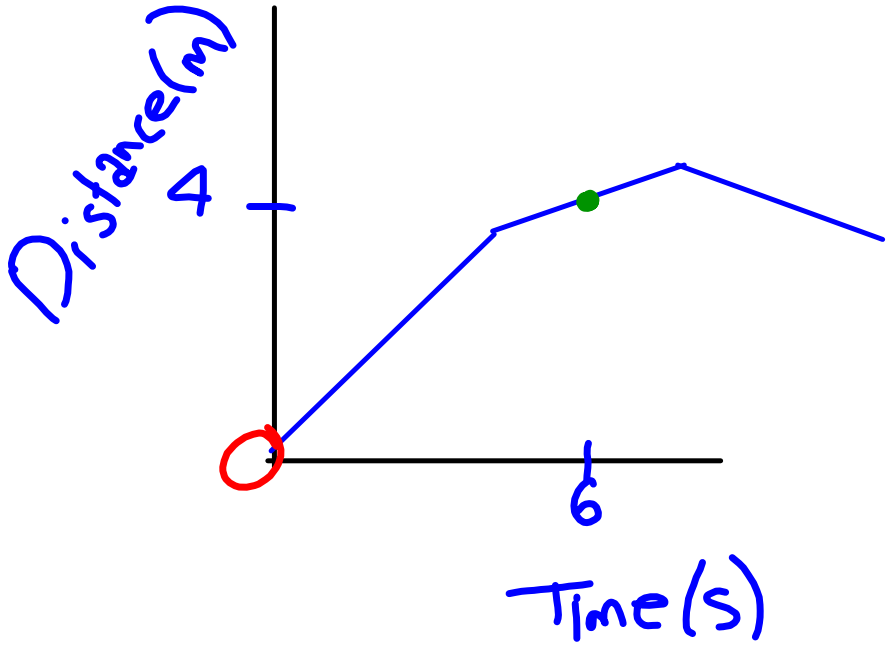
Straight line
= constant velocity
= no acceleration





A curved line =
non-uniform
non-constant
has acceleration

Find Velocity at an Instant



$\frac{4m}{6s}$

$V = \frac{d}{t}$

$\frac{4m}{6s}$

$= 0.66\frac{m}{s}$

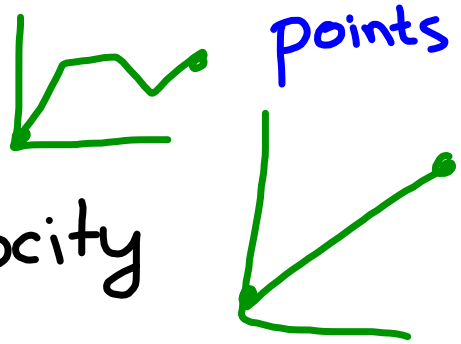
What is the velocity at 6 seconds?

$$V = \frac{d}{t} = \frac{4}{6} = 0.67\frac{m}{s}$$

Find velocity when constant.

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

Use any 2 points



Find average velocity

$$\frac{y_{final} - y_{initial}}{x_{final} - x_{initial}}$$

Must use initial and final points

Distance vs Time Graphs