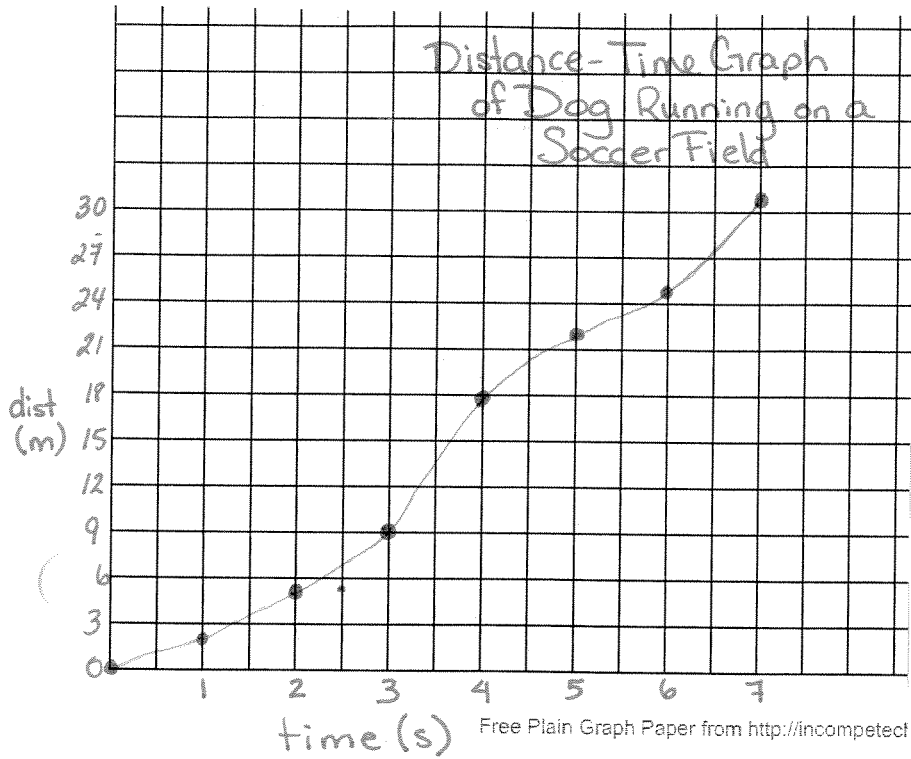


12.3 CVU

#1) a)

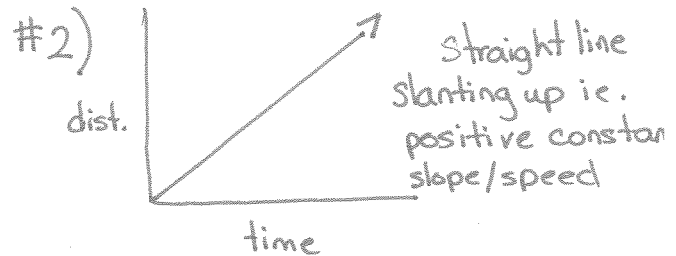


b)  $V_{av} = \frac{\Delta d}{\Delta t} = \frac{31m - 0}{7s - 0} = 4 \text{ or } 4.4m/s$

c)  $V_{av} = \frac{\Delta d}{\Delta t} = \frac{31 - 22}{7 - 5} = 4.5m/s$

d) 1st second

e) 3rd second



#3) a)  $V_{av} = \frac{21km - 0km}{0.5h - 0h} = 42km/h$

b)  $V_{av} = \frac{100km - 21km}{1.5h - 0.5h} = 79km/h$

c) Yes, straight line &  $V_{av} = \text{instantaneous } v$

#4) 1) Draw a tangent line @ that point on the graph and determine it's slope

$$\frac{y_f - y_i}{x_f - x_i}$$

#5) It flies quickly for 2s, slows down the next 2s, stops for 2s, then flies slower but almost constant for 4s.

b)  $\frac{68cm - 0cm}{10s - 0s} = 6.8cm/s$

c)  $v = 10m/s @ 2s$

$v = 0 @ 5.5s$

$v = 5cm/s @ 9s$

\* approx. the slope of the tangent!