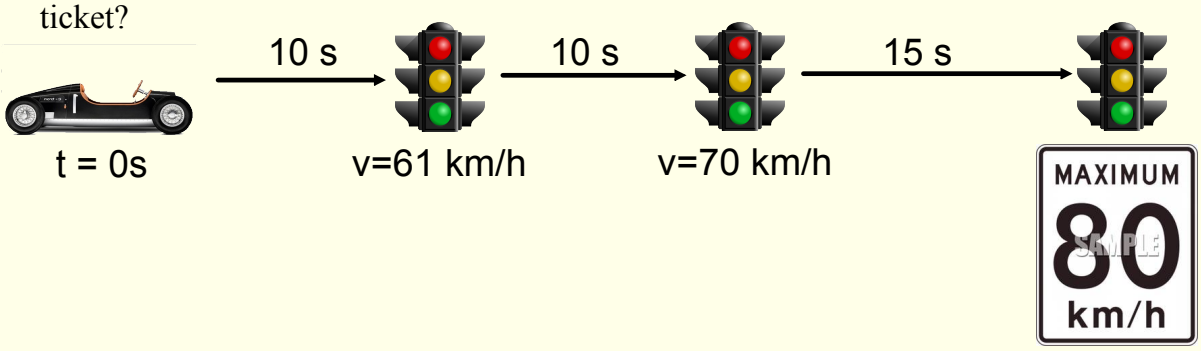
Warm Up - Speeding? (Board Work)

A car is cruising down the road. At t = 0 seconds the car begins to accelerate at a constant rate. Ten seconds later the car passes through an intersection and the photo radar clocks his speed at 61 km/h. The car passes through the second intersection ten seconds later and his speed is 70 km/h. If the car passes through the third intersection fifteen seconds later and the speed limit is 80km/h, could the driver get a speeding ticket?



Also... What is the initial speed of the car? What is the car's acceleration? Sketch a graph.

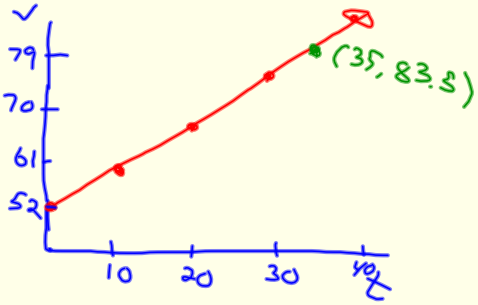
Debrief - Speeding?

Table of Values

t (s)	v (km/hr)
0	52
10	61
20	70
30	79
35	83.5

+10 (10 to 20) +9

Graph



Acceleration

$m = \frac{9\ km/hr}{10\ s}$

$= 0.9\ \frac{km/hr}{s}$

Discuss: Linear Relations / Constant Rate / Slope