

Random Equations

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Whenever

Discussion Worksheet Week 1

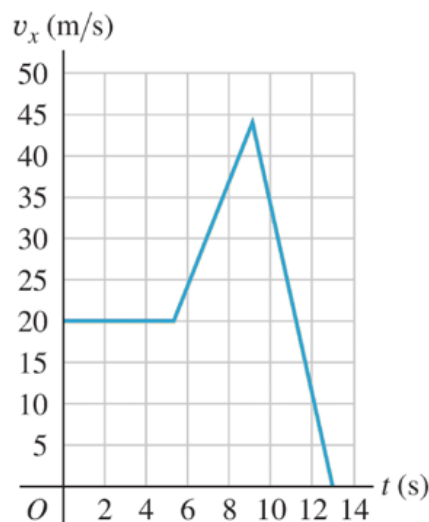
“Motion in 1 dimension”

Agenda:

- 1) First, we will make sure Gradescope is working for everyone. Upload this blank worksheet first and overwrite it at the end of class when the problem (below) is completed.
- 2) Problem 2.29
 - Note that the figure below could have been more precise: We will assume that the t-coordinates, for which the curve has “sharp corners” are at $t=5$ s, $t=9$ s, and that the curve crosses the t-axis at $t=13$ s. We will assume that the maximum velocity is 45 m/s.

•• The graph in Fig. E2.29 shows the velocity of a (doped?) cyclist plotted as a function of time. (a) Find the instantaneous acceleration at $t = 3$ s, $t = 7$ s, and $t = 11$ s. (b) How far does the cyclist go in the first 5 s? The first 9 s? The first 13 s?

Figure E2.29



$$\lim_{(x,y) \rightarrow (\pi,0)} \frac{\cos x}{\sin y}$$

$$\frac{\Delta V}{V} = \frac{2\Delta r}{r} \frac{\Delta h}{h}$$

I'm pretty sure the question means you increase y at the given point P . So if $P = (x_0, y_0)$, we're looking at what happens at $(x_0, y_0 + \Delta y)$

$$\begin{bmatrix} 1 & 2 \\ 1 & 1 \end{bmatrix}$$