

THE BASIS FOR BIG 5 DERIVATION.

$$\left. \begin{aligned} \Delta x &= x_f - x_o \\ \bar{v} &= \frac{\Delta x}{\Delta t} \\ \bar{a} &= \frac{\Delta v}{\Delta t} \end{aligned} \right\} \text{BASIC DEFINITION}$$

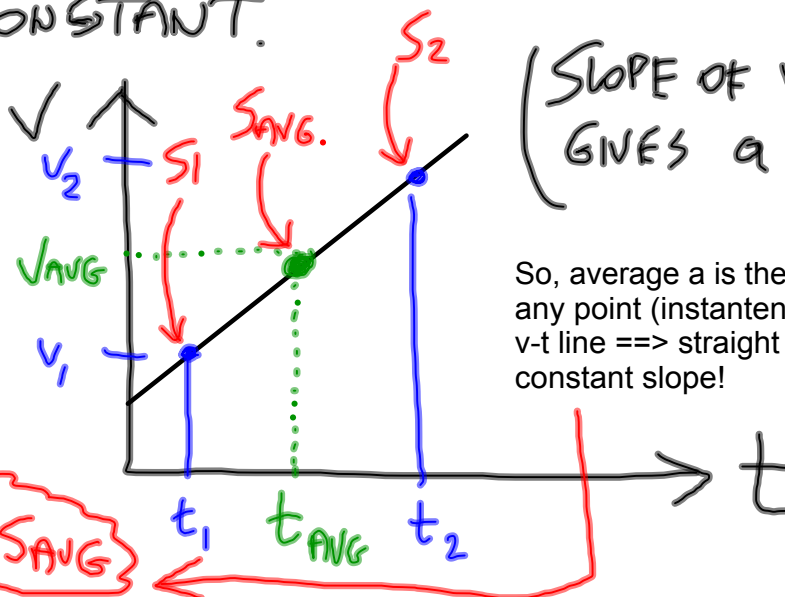
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ASSUMPTION:

$$a_{\text{AVG}} = a_{\text{INST.}}$$

$a = \text{CONSTANT.}$

(SLOPE OF $v-t$)^{*}
GIVES a .



So, average a is the same as a at any point (instantaneous) along the $v-t$ line ==> straight line has a constant slope!

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