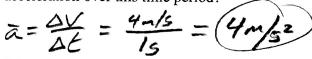
	Physics 200 Notes: Acceleration
)	tells you how something's position changes during one second. Acceleration tells you how something's velocity changes during one second.
	Ret -
	Is acceleration a vector or scalar quantity? Mot just mag nitude, Acceleration can happen in two fundamentally different ways:
	Acceleration can happen in two randamentary animates ways.
	1) Changing Speed or both So I got
	1) Changing Speed or both So I got 2) Changing Pirection rid
	Negative acceleration is also called <u>deceleration</u> Showord
	Common metric units for acceleration are: MSZ Sometimes inneh
	The Analogous Relationship between Velocity and Acceleration:
	If Pam has a <i>velocity</i> of +6m/s, that means she travels 6m for every second that ticks by. Another way to say this is that, for each passing second , Pam adds 6m to her position .
)	Analogously, if Pam's acceleration is +6m/s/s, this means with each passing Second, 6m/s is added to her velocity.
	Velocity adds <u>meters</u> each second.
	Acceleration adds meters per second each second.
	Velocity is the slope of a <u>position</u> vs <u>time</u> graph.
	Velocity is the slope of a Velocity vs time graph.
	The acceleration formula:
	Velocity describes a change in position over a time interval. Acceleration describes a change in velocity over a time interval.
	$a_{\text{average}} = \overline{a} = \frac{\Delta V}{\Delta t}$

Acceleration Formula Practice Problems:

1. Suppose your velocity is 2m/s. One second later, your velocity is 6m/s. What is your average acceleration over this time period?



2. When your watch reads 8:01:32 AM, your velocity is 6m/s At 8:01:40 AM (on the same day), your velocity is 2m/s. What is your average acceleration over this time period?

$$a = \frac{\Delta V}{\Delta t} = \frac{-4m/s}{8s} = -0.5m/s^2$$

Motion Graphs:

Each row of graphs below comprises a position vs. time graph, a velocity vs. time graph, and an acceleration vs. time graph. Every graph in a row conveys the same motion. For each row, use the one completed graph to fill in the incomplete graphs with reasonable curves. Some rows will have a wider variety of possible answers. Assume that all acceleration is constant.

