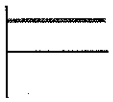
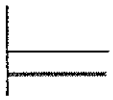
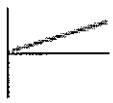
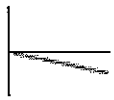
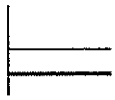
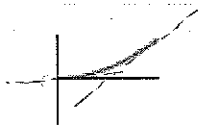
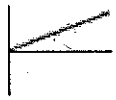
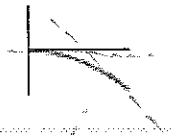
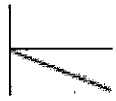
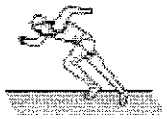
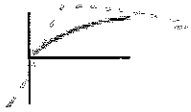
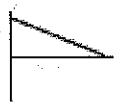
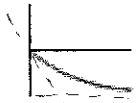
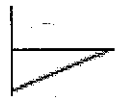
Physics 11 Unit 2 - Supplementary Review for Final Exam

Fig. 2.17

	$\vec{d}$–t graphs	$\vec{v}$–t graphs	Velocity	Acceleration	Example
Stopped			$\vec{v} = 0$	$\vec{a} = 0$	
Constant velocity			$\vec{v} = 0$	$\vec{a} = 0$	
			$\vec{v} > 0$	$\vec{a} = 0$	
Speeding up			$\vec{v} < 0$	$\vec{a} = 0$	
			$\vec{v} > 0$ +	$\vec{a} > 0$ +	
Slowing down			$\vec{v} < 0$ −	$\vec{a} < 0$ −	
			$\vec{v} > 0$ +	$\vec{a} < 0$ −	
			$\vec{v} < 0$ −	$\vec{a} > 0$ +	

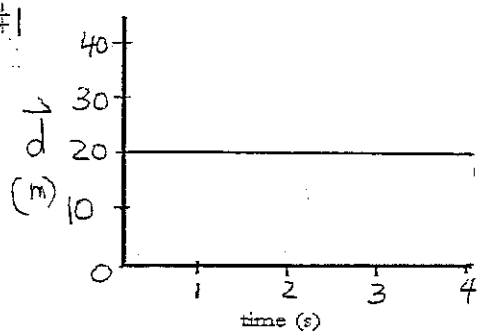
Each $\vec{v}$-t graph can be generated from its corresponding $\vec{d}$-t graph by taking slopes of the $\vec{d}$-t graph at selected times and plotting them on a $\vec{v}$-t graph.

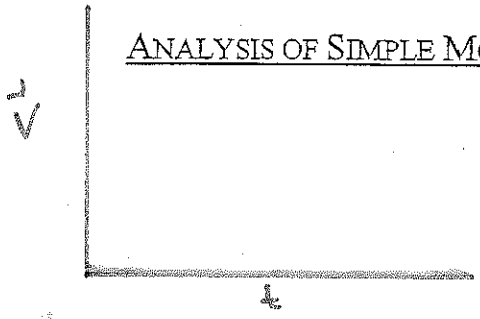
1) Draw Corresponding $\vec{d}$ vs t or $\vec{v}$ vs t graph

2) describe the motion in words

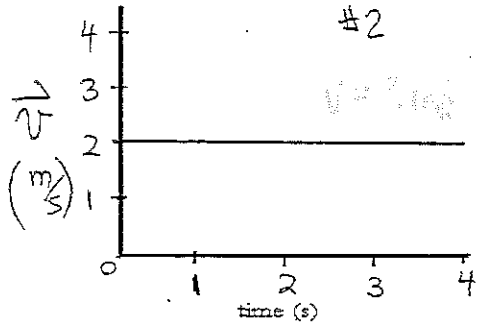
Analysis of Simple Motion

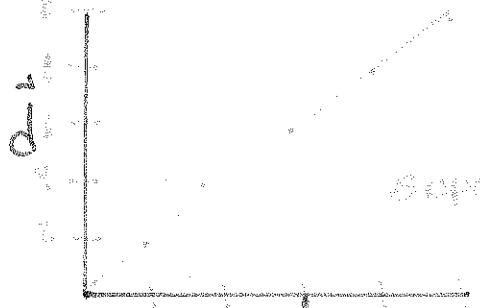
#1



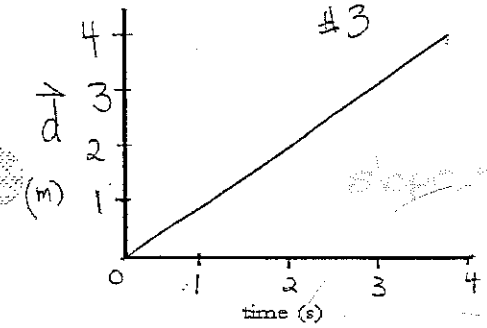


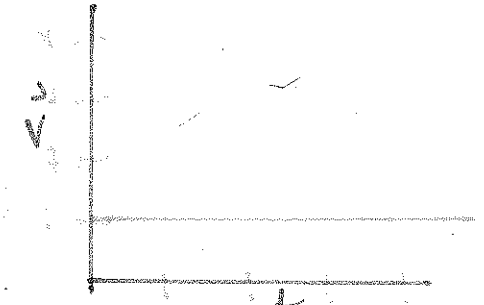
#2





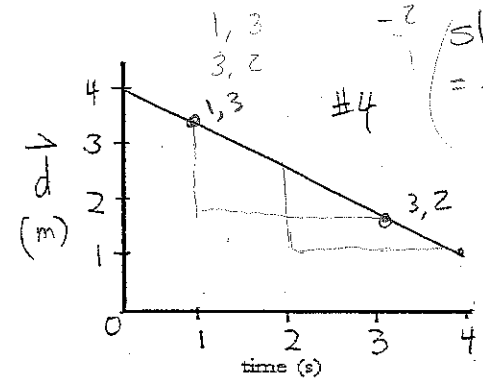
#3

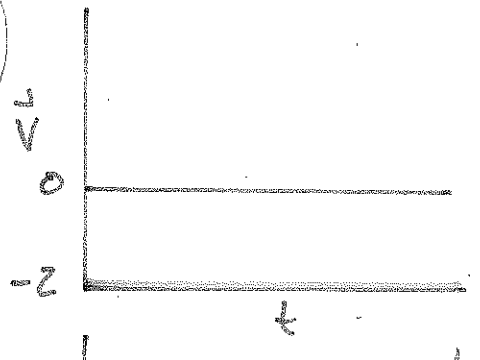




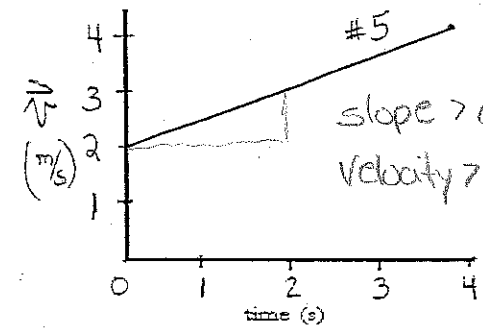
#4

1, 3
3, 2
$\frac{-2}{1}$ slope = −2

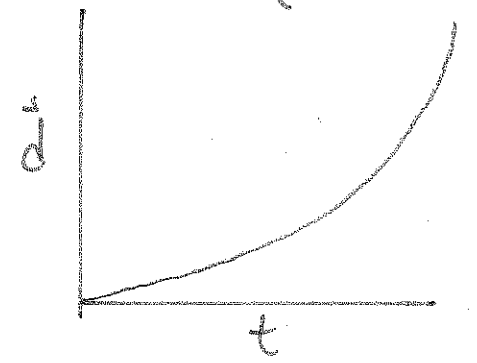




#5



slope > 0
Velocity > 0



speeding up
slope > 0
velocity > 0