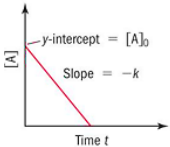
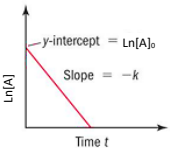
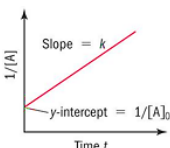
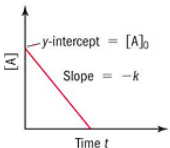
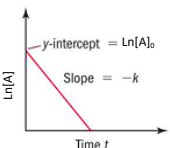
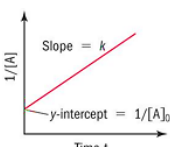


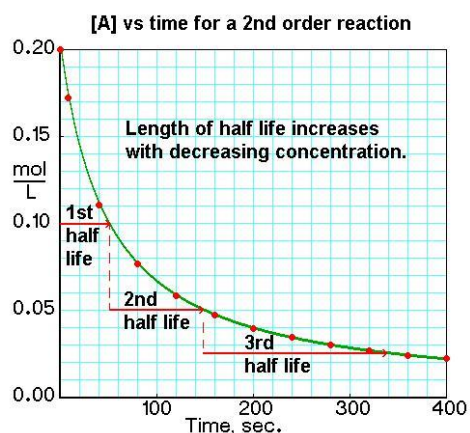
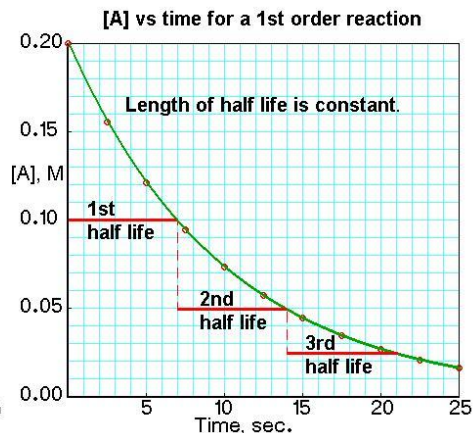
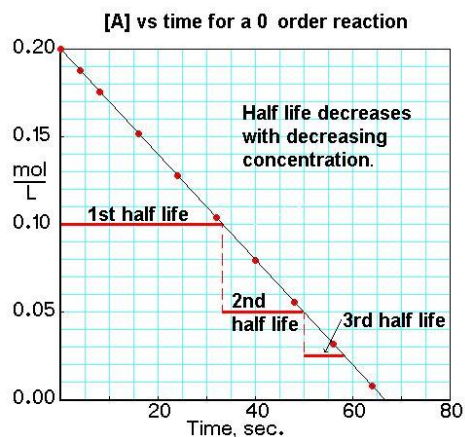
N9 – Rate Laws

Kinetics Summary Glue In - See Kinetics Reference Sheet for More Details								
Differential Rate Law <i>Rate vs Concentration Data</i>			Integrated Rate Law <i>Graph the following versus time. The one that is linear tells you the order! Why? Because of Math. Ha!</i>					
Order	Rate Law	Units on K	Memory Device	Y-axis	y = mx + b format	Straight Line Plot	k from Graph	Half Life Equation
0 th	k	M/sec	C <i>Concentration</i>	[A]	$[A]_t = -kt + [A]_0$		- slope	$t_{1/2} = \frac{[A]_0}{2k}$
1 st	k [A]	1/sec	N <i>Natural Log</i>	Ln [A]	$Ln[A]_t = -kt + Ln[A]_0$		- slope	$t_{1/2} = \frac{0.693}{k}$
2 nd	k [A] ²	1/M•sec	R <i>Reciprocal</i>	1/[A]	$\frac{1}{[A]_t} = kt + \frac{1}{[A]_0}$		slope	$t_{1/2} = \frac{1}{k [A]_0}$

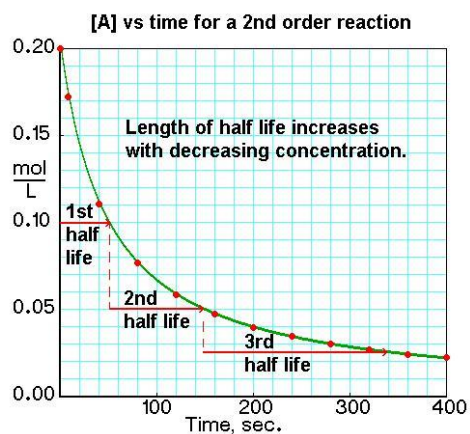
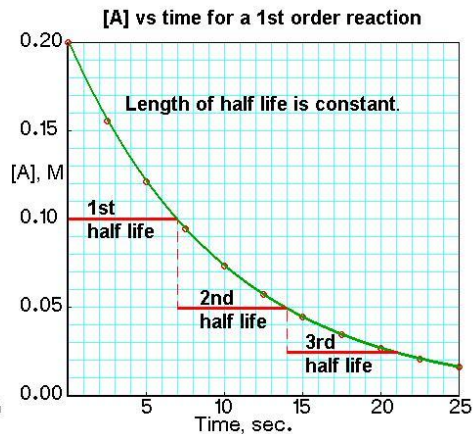
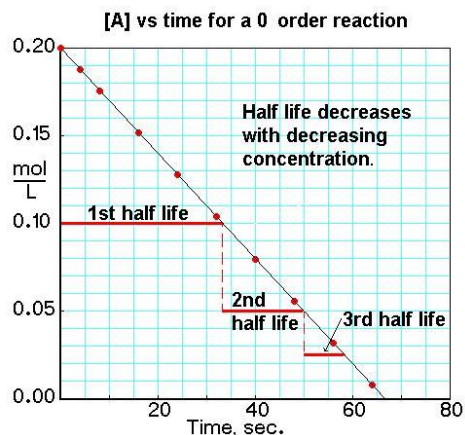
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N9 – Rate Laws



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