

	Order		
	Zero	First	Second
Rate law	Rate = $k$	Rate = $k[A]$	Rate = $k[A]^2$
Integrated rate law	$[A] = -kt + [A]_0$	$\ln[A] = -kt + \ln[A]_0$	$\frac{1}{[A]} = kt + \frac{1}{[A]_0}$
Plot needed to give a straight line	$[A]$ vs $t$	$\ln[A]$ vs $t$	$\frac{1}{[A]}$ vs $t$
Relationship of rate constant to slope of straight line	Slope = $-k$	Slope = $-k$	Slope = $k$
Half-life	$t_{1/2} = \frac{[A]_0}{2k}$	$t_{1/2} = \frac{0.693}{k}$	$t_{1/2} = \frac{1}{k[A]_0}$