Quiz 17.2 – The Arrhenius Equation

Name: _____

A reaction's rate constant is measured at different temperatures. Data are summarized in the table below:

Trial	k ($^1/_s$)	T ($^\circ C$)
1	1.4×10^{-4}	25
2	3.7×10^{-4}	75

Use these data to find the activation energy for this reaction

What would you expect the rate constant to be at $-10^\circ C$?

What is the Arrhenius pre-factor or frequency factor, A, for this reaction?

The Arrhenius equation is based on a fairly simple model of reaction rates. What are some real factors which might make reaction rates deviate from the Arrhenius equation?

Good Bones

By Maggie Smith

> Life is short, though I keep this from my children.
> Life is short, and I've shortened mine
> in a thousand delicious, ill-advised ways,
> a thousand deliciously ill-advised ways
> I'll keep from my children. The world is at least
> fifty percent terrible, and that's a conservative
> estimate, though I keep this from my children.
> For every bird there is a stone thrown at a bird.
> For every loved child, a child broken, bagged,
> sunk in a lake. Life is short and the world
> is at least half terrible, and for every kind
> stranger, there is one who would break you,
> though I keep this from my children. I am trying
> to sell them the world. Any decent realtor,
> walking you through a real shithole, chirps on
> about good bones: This place could be beautiful,
> right? You could make this place beautiful.