

## Quiz 17.2 – The Arrhenius Equation

Name: \_\_\_\_\_

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

Trial	Rate ( $M/s$ )	T ( $^{\circ}C$ )
1	$1.4 \times 10^{-4}$	25
2	$3.7 \times 10^{-4}$	75

Use these data to find the activation energy for this reaction

What would you expect the reaction rate 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.