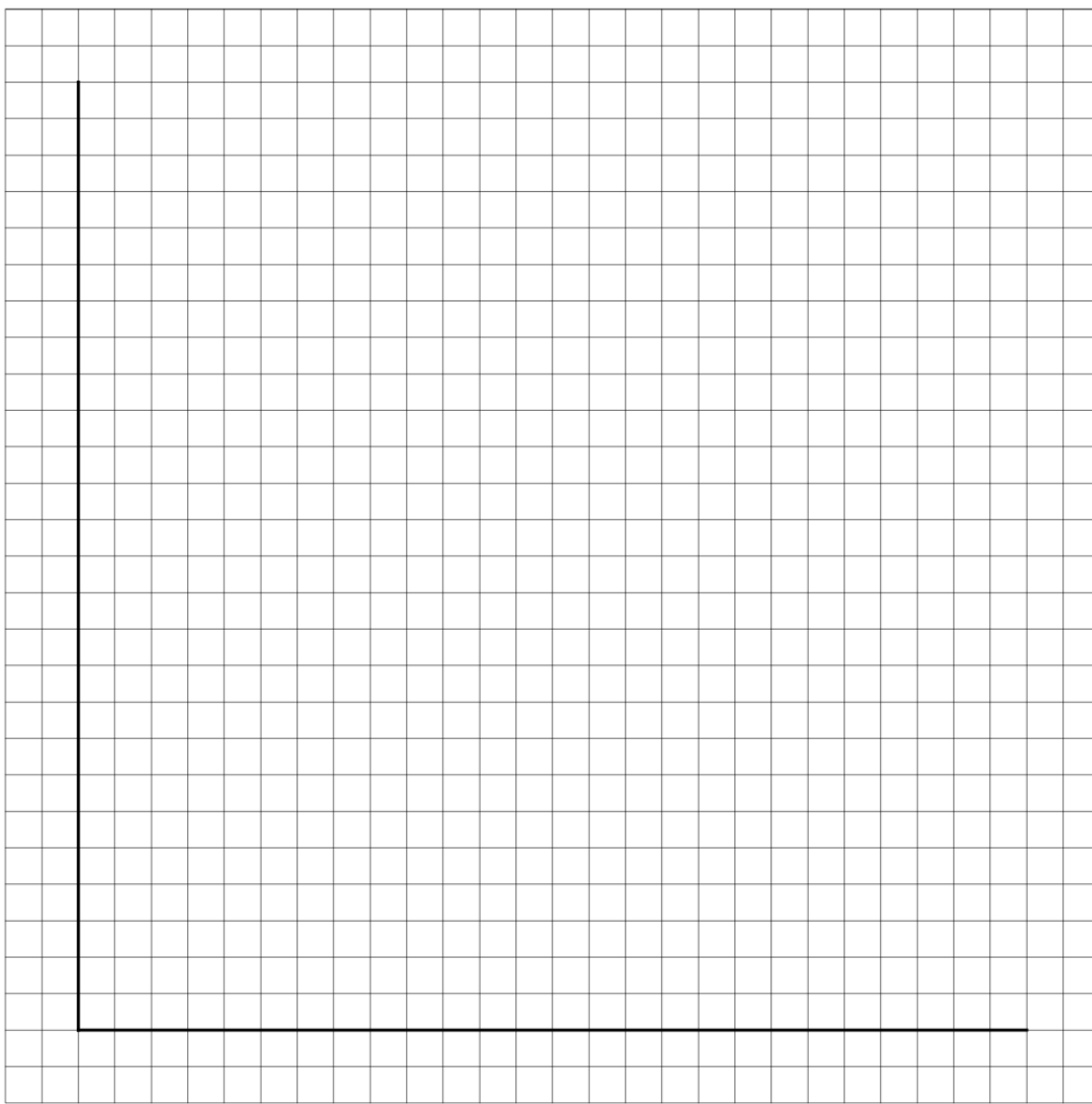


Arrhenius Equation Data Sets (Rate Constant as a function of Temperature)

- Determine the activation energy for the rearrangement of methylisonitrile,  $\text{CH}_3\text{NC} \rightarrow \text{CH}_3\text{CN}$  from the following determinations of  $k$  at various temperatures:

Temperature, °C	$k, \text{s}^{-1}$	T, K	1/T, $\text{K}^{-1}$	$\ln k$
189.7	$2.52 \times 10^{-5}$			
198.9	$5.25 \times 10^{-5}$			
230.3	$6.30 \times 10^{-4}$			
251.2	$3.16 \times 10^{-3}$			



- For the same reaction, what is the value of  $k$  when the temperature is 430.0 K?