EXPERIMENT/SUBJECT		DATE	
	LAB PARTNER	LOCKER/DESK NO.	COURSE & SECTION NO.

Calculations continued...

Trial THREE

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{1.12 - 1.14}{120 - 102} = -1.11 \times 10^{-3} \text{ A/s}$$

OR M/s

↳ All of the slopes or reaction rates obtained are negative. This makes sense because as a reaction proceeds, the concentration of reactant(s) decrease.

↳ TRIAL FOUR

$$\frac{y_2 - y_1}{x_2 - x_1} = \frac{1.02 - 1.06}{174 - 138} = -1.11 \times 10^{-3}$$

5. ↳ using Trial ① and ② (change in [Br2]

$$x = \frac{\log r_1/r_2}{\log \frac{[A]}{[2A]}}$$

$$= \frac{\log\left(\frac{-3.03 \times 10^{-4}}{-2.9 \times 10^{-4}}\right)}{\log\left(\frac{4 \times 10^{-3}}{8 \times 10^{-3}}\right)} = \frac{0.01904963}{-0.30102999}$$

$$= -0.063$$

$$\approx 0$$

↳ using Trial ② and ③ (change in [HCl]

$$y = \frac{\log r_1/r_2}{\log \frac{[A]}{[2A]}} = \frac{\log \frac{-5.83 \times 10^{-4}}{-2.9 \times 10^{-4}}}{\log 0.2/0.4} = \frac{\log \frac{-1.11 \times 10^{-3}}{-2.9 \times 10^{-4}}}{\log 0.2/0.4}$$

$$= 1.98$$

$$\approx 2$$

↳ using Trial ③ and ④ (change in [Acetone]

$$z = \frac{\log \frac{-1.11 \times 10^{-3}}{-2.9 \times 10^{-4}}}{\log 0.8/1.6} = 1.93$$

$$\sim 2$$

6. Rate = $K[HCl][Acetone]$

7. TRIAL ONE (K-VALUE)

$$+5.24 \times 10^{-4} = K(0.2)(0.8)$$

$$K = -3.28 \times 10^{-3}$$

TRIAL TWO

$$K = 3.64 \times 10^{-3}$$

TRIAL THREE

$$K = 3.47 \times 10^{-3}$$

TRIAL FOUR

$$K = 3.47 \times 10^{-3}$$

SIGNATURE	DATE	WITNESS/TA	DATE