

Quiz 4 Chm 206 Sample Name:

Lab Station(1 pt):

Most of these questions pertain to the experiment you performed last week.

Prior to this quiz you should have downloaded the data from the next link on the lab page. Create graphs for zero, first and second order using the data provided. Use this spreadsheet to answer six questions such as...

1. In your spreadsheet, display [Blue] in scientific notation and select 3 places past the decimal. What is [Blue] at $t = 0$? Copy this number down to 3 places past the decimal followed by the exponential. Use exponential format: 1.234E-4 or 6.789E+15.

2. In your spreadsheet, display $\ln[\text{Blue}]$ in number format and select 3 places past the decimal. What is the numerical value in your spreadsheet for the column for $\ln[\text{Blue}]$ at $t = 130$ s. Copy this number down to the third decimal place. Use floating point format: Examples: 10.123 or -2.345. Do NOT use exponential format.

3. In your spreadsheet, display $1/[\text{Blue}]$ in scientific notation and select 3 decimal places. What is the numerical value in your spreadsheet for the column for $1/[\text{Blue}]$ at $t = 90$ s? Copy this number down to the third decimal place. Use exponential format: 1.234E-4 or 6.789E+15.

4. What is the order of the reaction?

5. What is the rate expression in terms of [Blue]?

6. Add a trendline to the straight-line graph. Display the equation on the graph. What is the numerical value of the rate constant?

7. What is the formula for the cell in your spreadsheet for the column for $1/[\text{Blue}]$ at $t = 80$ s? Start with the equals sign.

8. What is the formula for the cell in your spreadsheet for the column for $\ln[\text{Blue}]$ at $t = 50$ s? Start with the equals sign.

9. What is the formula for the cell in your spreadsheet for the column for [Blue] at $t = 20$ s? Start with the equals sign.

As usual, Questions 7 – 10 will pertain to Experiment 4.