Solubility Curves

Name(s): Date: Lab Section:			
DATA			
Please attach copies of your Excel spreadsheets and graph to this worksheet when you turn it in to your instructor.			
1.	What were the equation and R-squared value for your linear trendline? For your second order polynomial trendline?		
2.	What was your unknown number? What was the concentration of your unknown?		
QUESTIONS			
1.	Using your graph, tell if each of these solutions would be unsaturated, saturated, or supersaturated.		
	A. $110 \mathrm{g}$ of KNO $_3$ in $100 \mathrm{g}$ of H $_2$ O at $40 ^{\circ}\mathrm{C}$ B. $60 \mathrm{g}$ of KNO $_3$ in $100 \mathrm{g}$ of H $_2$ O at $70 ^{\circ}\mathrm{C}$ C. $140 \mathrm{g}$ of KNO $_3$ in $200 \mathrm{g}$ of H $_2$ O at $60 ^{\circ}\mathrm{C}$		
2.	According to your graph, will 50 g of KNO_3 completely dissolve in 100 g of H_2O at 50 °C? Explain.		

3.	Using your trendline equation, how many grams of KNO_3 will dissolve in 100 g of H_2O at 30 °C?
4.	Compare your solubility graph to the literature. How close were the lines to each other? Explain any regions of error and site your literature source. Please print out a copy of the literature solubility graph and attach it to this worksheet when you turn it in to your instructor.