

Name

Section

Date

Data Sheet 1

unknown number N/Amolarity of unknown acid 1.00 of NaOH solution 0.500

	solution			
	1	2	3	4
unknown acid solution				
final buret reading, mL	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
initial buret reading, mL	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
volume of unknown acid, mL	<u>40</u>	<u>40</u>	<u>40</u>	<u>40</u>
NaOH solution				
final buret reading, mL	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
initial buret reading, mL	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
volume of NaOH solution, mL	<u>12.5</u>	<u>25</u>	<u>37.5</u>	<u>50</u>
total volume of solution, mL	<u>250</u>	<u>250</u>	<u>250</u>	<u>250</u>
pH	<u>6.42</u>	<u>6.81</u>	<u>7.09</u>	<u>7.24</u>

Data Sheet 2

Calculating K_a of your unknown acid

	solution			
	1	2	3	4
initial number of moles				
HAn(aq)				
OH ⁻ (aq)				
number of moles at equilibrium				
HAn(aq)				
An ⁻ (aq)				
equilibrium concentration, mol L ⁻¹				
HAn(aq)				
An ⁻ (aq)				
H ₃ O ⁺ (aq)				
1/[An ⁻]				
K_a				
slope of line _____				
K_a , determined from slope _____				