BUFFERS
SAMPLES OF DATA TABLES FOR REPORT

2. **For each of the five buffers, report in a table the volumes of each solution used, the expected pH, the measured pH, and the pHs after the addition of the acid or the base.**

pH expected	Vol, mL HA 0.200 M $H_2PO_4^-$	Vol mL A^- 0.200 M HPO_4^{-2}	$[H_2PO_4^-]$ M	$[HPO_4^{-2}]$ M	pH OBS D	pH upon addn of H^+	pH upon addn of OH^-
6.0	47.1	2.9	0.0941	0.0059	5.60	2.73	6.34
6.5							
7.0							
7.5							
8.0							

3. **Using the measured pH and the appropriate $[HPO_4^{2-}]/[H_2PO_4^{-1}]$ ratio fro each of your buffers, substitute into the Ka' expression and obtain a value for the apparent pKa' of the phosphate. Organize your data in a table ...(see below...). How does your aerage apparent pKa' compare with 6.75, a typically accepted value for this constant? Show your calculations. Explain why Ka' ... Ka.**

pH expected	pH measured	$[H^+]$ M	$\frac{[HPO_4^{-2}]}{[H_2PO_4^-]}$	K_a' apparent	pK'_a
6.0	5.60	2.51×10^{-6}	0.0627	1.59×10^{-7}	6.80
6.5					
7.0					
7.5					
8.0					
					ave = ?