

Revised August 2010



HONORS WORKSHEET 12a: ANSWERS

1.
 - (a) 0.699
 - (b) 12

2.
 - (a) Approximately 9, Phenolphthalein
 - (b) Weak, equivalence point above 7
 - (c) 20 mL
 - (d) $\text{NaOH} + \text{HA} \rightarrow \text{NaA} + \text{H}_2\text{O}$, 0.125 M

3.
 - (a) It acts as a base since it accepts H^+
 - (b) The reaction is reversible, meaning the base in (a) is weak (not completely dissociated)
 - (c) Water is an acid, it donates H^+
 - (d) (Either) H_2O and OH^- (or) $\text{C}_6\text{H}_5\text{NH}_2$ and $\text{C}_6\text{H}_5\text{NH}_3^+$

4. Curve is a *sketch*. Points for following;
Axis labeled (x with volume of acid added, y with pH)
Curve starts just above 7
Equivalence point at 25 mL on x-axis and below 7 on y-axis
Curve finishes well below 7
Curve ends at 40.0 mL on x-axis