

+ **WS 10.11 Review Worksheet**

1. A solution has an $[\text{OH}^-] = 2.6 \times 10^{-3} \text{ M}$. What would be the $[\text{H}^+]$, pH, and pOH?

2. What would be the pH of a 0.0000793 M KOH solution?

3. The pH of a really diluted acid, such as 0.0000000022M HCl, is 7. Why?

4. 2.63 g NaOH are dissolved in 156 mL of solution. Determine the NaOH concentration & the pH.

[NaOH]= _____

pH= _____

5. Complete & balance this reaction:



6 It takes 35.92 mL of 0.165 M $\text{Ba}(\text{OH})_2$ and 23.62 mL of HCl to reach the endpoint of a titration. What is the molarity of the HCl solution?

7. Calculate the pH of a 500. mL solution of containing 0.222 g of hydrazine (liquid rocket propellant)?
[see wkst 10.9 for values]

8. The hydrogen sulfate ion is a Brønsted acid. Show its reaction with water, labeling all acid/base pairs.

9. **BaCO₃** is made of what acid _____ and what base _____
Would **BaCO₃** be acidic, basic, or neutral in water?

10. With respect to the **HSO₄⁻ / SO₄⁻²** buffer system, show how it reacts to the addition of an acid and a base: