

This quiz is take-home and open book, and it is intended that all members of the group contribute to completing it. It is a violation of the Academic Honor Code to sign a quiz that you did not work on.

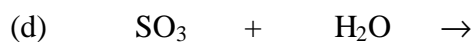
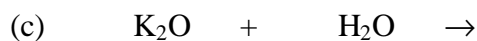
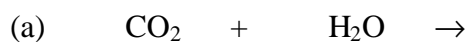
The quiz is due at the end of class on Thursday, November 30.

List names in alphabetical order, and print them clearly!

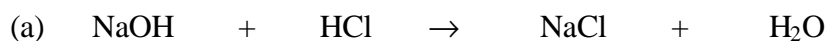
Put names on all pages, and staple pages together

Points

- (4) 1. Complete and balance the equations describing the reaction of the following oxides with water. Indicate whether the products would be an **acid** or a **base**.



- (3) 2. In the following **neutralization** reactions, **circle** the acid and **underline** the base.



List names in alphabetical order. **Be sure to staple pages together!**

- (4) 3. Fill in the following table with the corresponding hydrogen ion concentration, $[H^+]$, or hydroxide ion concentration, $[OH^-]$. Indicate whether the solution would be **acidic** or **basic**.

$[H^+]$	$[OH^-]$	acidic or basic?
$3 \times 10^{-4} \text{ M}$		
$4 \times 10^{-9} \text{ M}$		
	$2 \times 10^{-2} \text{ M}$	
	$5 \times 10^{-10} \text{ M}$	

- (2) 4. Calculate the pH of solutions with the following $[H^+]$:

1.5 M

$2.3 \times 10^{-3} \text{ M}$

$4.5 \times 10^{-6} \text{ M}$

$7.5 \times 10^{-11} \text{ M}$

- (2) 5. Calculate the $[H^+]$ of solutions of the following pH:

2.5

4.9

8.2

13.1