Lesson 137: Indicators and the pH Scale Notes Chemistry with Lab

Acid/Base indicator: _____ that changes _____ in the presence of an _____ or a _____.

Solution	**Litmus paper (R→ B, B→R, or NC)**	**Phenolphthalein (color or NC)**	**Bromothymol Blue (color or NC)**	**Cabbage Juice (color or NC)**
HNO_3				
NaOH				
KOH				
H_2SO_4				

Conclusion Questions:

1. Litmus turns _____ in an acid and _____ in a base.
2. Phenolphthalein (phth) turns _____ in an acid and _____ in a base.
3. Bromothymol blue turns _____ in an acid and _____ in a base.
4. Cabbage juice turns _____ in an acid and _____ in a base.

Strong Acids: dissociate _____ in _____ (ex: _____)

Weak Acids: dissociate _____ in _____ (ex: _____ or _____)

Strong Bases: dissociate _____ in _____ (ex: _____)

Weak Bases: dissociate _____ in _____ (ex: _____ or _____)

pH = _____

0_____ 7 _____ 14

Determine the pH of a solution of HCl that has a molarity of 1×10^{-4} M.

Calculate the pH for a solution of HNO_3 with a molarity of _____.

Calculate the pH for a solution of H_2SO_4 with a molarity of _____.

$[H^+][OH^-]$ = _____

Calculate the pH of a solution of NaOH with a molarity of 3.0×10^{-2} M.

Find the pH for a solution of $Ca(OH)_2$ with a molarity of _____.

Calculate both the hydrogen ion concentration and the hydroxide ion concentration for an aqueous solution that has a pH of _____.

The Chemistry Quiz

CR1. _____ CR2. _____ 1. _____ 2. _____ 3. _____

4. _____ 5. _____