

QUIZ FRIDAY!

PURPOSE

How To WRITE A
NEUTRALIZATION
REACTION

WARMUP

convert $\text{pH} = 13.1$ to $[\text{H}^+]$

answer: $7.94 \times 10^{-14} \text{ M}$

$8 \times 10^{-14} \text{ M}$

PROBLEM:

convert $[\text{OH}^-] = 0.00531$ to pH

ANSWER:

$[\text{H}^+] = 1.88 \times 10^{-12}$ so,
therefore

$\text{pH} = -\log [1.88 \times 10^{-12} \text{ M}]$

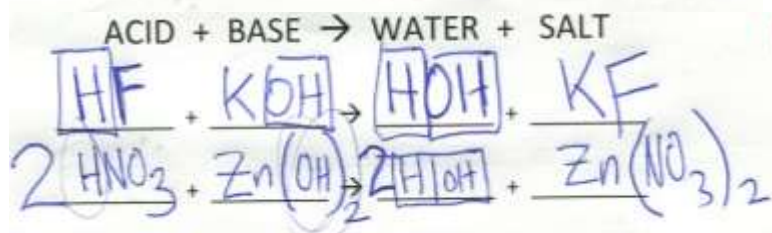
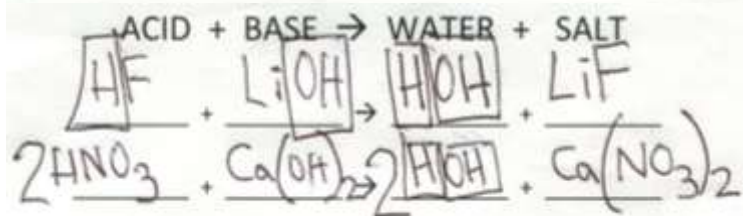
$\text{pH} = 11.72$

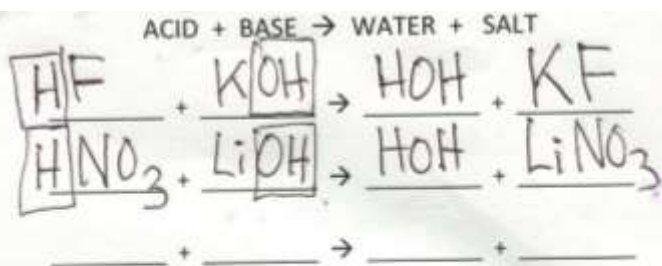
1. Properties of Acids and Bases [film clip]

	acids	bases
turn INDICATOR:	red	blue
electrolytes?	yes	yes
taste	sour	bitter
⊛ react with metal?	yes	NO.

2. How to write neutralizing reactions. [clip]

When acids are mixed with bases they undergo neutralization reactions:

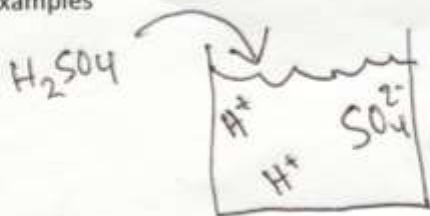




3. Acid/Base/Salt Definition [Invented in Sweden by Svente Arrhenius]

Acids are anything that increases H^+ concentration of an aqueous solution

examples



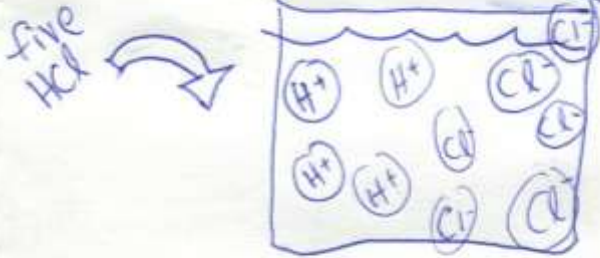
4. Bases are anything that increase OH^- concentration of an aqueous solution

5. Salt

salts are any ions that are left over when an acid neutralizes a base

6. Strong Acids

dissociation in water is 100%

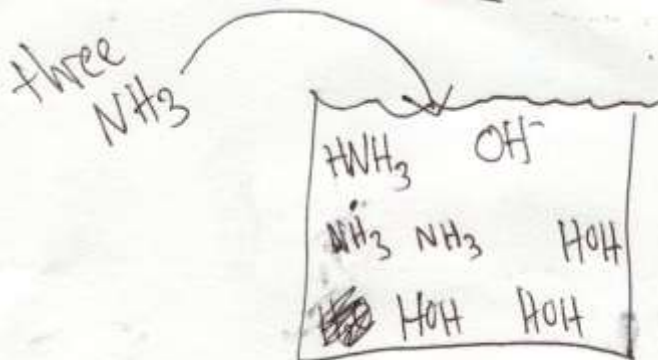


7. Weak Acids:

dissociation in water is very low



8. A COMMON WEAK BASE



Notice that NH_3 is a base. It increases the OH^- concentration *even though* it contains no OH^- itself!