

Name: _____

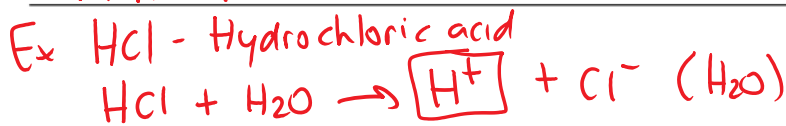
Date: _____

Block: _____

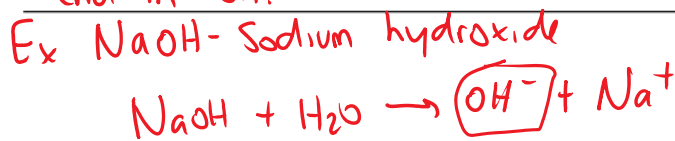
Chemical Reactions:

Lesson 10 – Acids and Bases

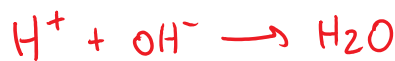
Acids: A chemical that when dissolved produces H^+ ion. Acid chemical formula all start with H



Bases: A chemical that when dissolved produces OH^- ions (hydroxide). Base chemical formula end in OH.



Neutralization: When an acid and a base are mixed the H^+ ions and OH^- ions combine to form water. Water is a neutral solution.



pH scale: A scale that measures the strength of acids and base

Ex. pH 2 \rightarrow pH 3

Change of $\times 10$

Acid is 10x weaker

Ex. pH 5 \rightarrow pH 3

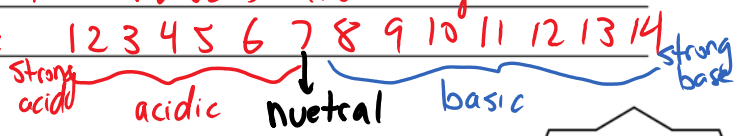
$10 \times 10 = 100x$

acid is 100x stronger

Ex. pH 9 \rightarrow pH 6

$10 \times 10 \times 10 = 1000x$

base becomes 1000x more acidic



Change
Each ~~increase~~ increase in pH increases/decreases the concentration by a factor of 10.

pH Indicators: Substances used to safely test the pH of a substance

Litmus Paper: A paper strip that changes colour depending on pH

Blue Paper: Changes red in an acid

Red Paper: Changes blue in a base

RED → **ACID** **BLUE** → **BASE**

Universal Indicator: Change to many different colours to tell you specifically what pH is

Bromothymol Blue 1 2 3 4 5 6 7 8 9 10 11 12 13 14
Ex. pH 10 Red orange/yellow green Blue violet

Litmus → Blue

Phen → Pinkish / purple

BB → Blue

You Try:

1) When the pH rises from 10 to 12, how many times more basic has the solution become?

$10 \times 10 = 100 \times$ more basic

2) What colour is litmus paper in an acidic solution?

RED!

3) What colour is bromthymol blue at the following pH levels?

a) pH 5

yellow/orange

b) pH 7

green

c) pH 9

Blue

Name: _____

Date: _____

Block: _____

Chemical Reactions:

Lesson 11 – Properties Acids and Bases

Property	Acid	Base
Taste	Sour	bitter
Touch	will burn	-Slippery
Litmus	Red	Blue
Reaction with some metals, such as magnesium or zinc	<ul style="list-style-type: none">- React w/metals- corrodes metals	No reaction
Electrical Conductivity	Conductive	conductive
pH	less than 7	more than 7
Production of ions	H^+	OH^-

Chemical Reactions:

Lesson 12 – Neutralization and Salts

Salt: _____

3 ways to produce salt:

1) Acid and a Metal

The best metals
to bond are Alkali
and alkaline
earth metals.

2) Acid and a Carbonate

A compound is a
carbonate if you have
a metal and
carbonate (CO_3)
ionically bonded.

3) Neutralization