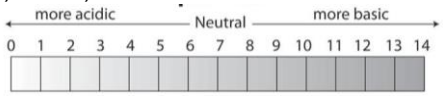
Acids & Bases Review (PreIB) **Name:** _____

1) Draw the pH scale. *Label acid, base, neutral.*



2) List 3 characteristics of acids: sour taste, low pH, turns litmus red

3) List 3 characteristics of bases: bitter taste, high pH, slippery feel, turns litmus blue

4) What are the reactants and products in a neutralization reaction?
Acid + Base → Water + Salt

5) How does Arrhenius define an acid & base?
Acid = dissociates to make H^{+1}
Base = dissociates to make OH^{-1}

6) How does Bronsted-Lowery define an acid & base?
Acid = proton (H^{+1}) donor
Base = proton (H^{+1}) acceptor

7) How can you tell if a compound is an acid by its formula? starts with an H
8) How can you tell if a compound is a base by its formula? ends in an OH

Name:

9) $Mg(OH)_2$ magnesium hydroxide
10) H_3PO_3 phosphorous acid
11) HCl hydrochloric acid
12) NH_3 ammonia
13) NaOH sodium hydroxide
14) HNO_3 nitric acid
15) $Fe(OH)_3$ iron III hydroxide
16) HF hydrofluoric acid
17) H_2SO_4 sulfuric acid

Give Formula:

18) Ammonium hydroxide NH_4OH
19) Sulfurous acid H_2SO_3
20) Hydroiodic acid HI
21) Nitric acid HNO_3
22) Potassium hydroxide KOH
23) Chromium (III) hydroxide $Cr(OH)_3$
24) Phosphoric acid H_3PO_4
25) Carbonic acid H_2CO_3
26) Barium hydroxide $Ba(OH)_2$
27) Hydrobromic acid HBr
28) Nitrous acid HNO_2

Given one value, find the three remaining values

29) pH = 2 pOH = _12__ $[H^+]$ = 1×10^{-2} $[OH^-]$ = 1×10^{-12} Circle: [Acid] or Base
30) pH = _6_ pOH = 8 $[H^+]$ = 1×10^{-6} $[OH^-]$ = 1×10^{-8} Circle: [Acid] or Base
31) pH = _4_ pOH = _10__ $[H^+]$ = 1×10^{-4} $[OH^-]$ = 1×10^{-10} Circle: [Acid] or Base
32) pH = _13_ pOH = _1__ $[H^+]$ = 1×10^{-13} $[OH^-]$ = 1×10^{-1} Circle: Acid or [Base]