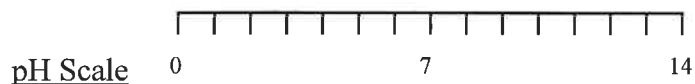


Acid/Bases Worksheet

- 1) Water dissociates into _____ & _____.
- 2) A hydrogen ion is written _____. A hydrogen proton is written _____.
- 3) A hydroxide ion is written _____.
- 4) A hydronium ion is written _____.
- 5) Hydrogen ions are (cations/anions). Hydroxide ions are (cations/anions).
- 6) Write the equation for the dissociation of HCl:
- 7) Write the equation for the dissociation of NaOH:
- 8) Write the equation for the dissociation of H₂CO₃:



- > [OH⁻] (increase/decrease)
- > [H⁺] (increase/decrease)
- > Acidity (increase/decrease)
- > Alkalinity (increase/decrease)

- 9) give the approximate pH of:
- _____ weak acid
 - _____ strong acid
 - _____ water
 - _____ salt
 - _____ weak base
 - _____ strong base

- 10) The conc of H⁺ @ pH 7 is _____.
- 11) [OH⁻] @ pH 7 is _____.
- 12) [H⁺] @ pH 10 is _____.
- 13) [OH⁻] @ pH 3 is _____.
- 14) Hi [H⁺] = _____ pH (hi or lo). Hi [OH⁻] = _____ pH (hi or lo)

- 15) TTrue or FFalse:

- _____ As pH increases, [H⁺] increases.
- _____ As pH decreases, [OH⁻] decreases.
- _____ A basic solution has more [H⁺] than [OH⁻].
- _____ A neutral solution has a pH of 7.
- _____ A solution of pH 5 has 100 × more [H⁺] than one with pH 8.

- 16) Under each term of the equation, write either: acid, base, neutral or water.



- 17) For each of the following indicate if pH will increase ↑, Decrease ↓, remain constant ↔.

drop acid	drop base	drop water	NaOH	HCl	drop acid	drop base	HCl	NaOH
H ₂ O	H ₂ O	H ₂ O	H ₂ O	H ₂ O	buffer	buffer	buffer	buffer