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| acid math  CλeMis+ry: http://genest.weebly.com  Stop in for help every day at lunch and Tues, &Thurs after school!  After-hours question? Email me at home: [eagenest@madison.k12.wi.us](mailto:eagenest@madison.k12.wi.us) | D | Name\_\_\_\_\_\_\_\_\_  Period\_\_\_\_\_\_\_\_ |

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| Compound | Metal Present? | H on the left? | Is it an acid? | Show the one OR MORE particles it makes when dissolved in water  (you can often just chop off the metal part from the left OR you may like using a table of common ions for help) | Is it an electrolyte? |
| NaOH |  |  |  |  |  |
| HCl |  |  |  |  |  |
| HF |  |  |  |  |  |
| CaO |  |  |  |  |  |
| CaF2 |  |  |  |  |  |

1. What is the mathematical definition of pH (give the formula)?
2. What two concentrations always give 1x10-14 when multiplied together?
3. **If the concentration of [H+] is 2.33x10-9, calculate the concentration of [OH-]**

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| Start by writing an appropriate formula. Circle the unknown… | Then rearrange to get the unknown alone. | Plug in the known values and solve. |

1. If the concentration of [H+] is 7.30x10-4, calculate the concentration of [OH-]
2. If the concentration of [H+] is 7.30x10-4, calculate the pH
3. \*\* If the concentration of [H+] is 2.33x10-9, calculate the pH and pOH
4. If the concentration of [OH-] is 2.33x10-9, find the [H+] and then calculate the pH (you will need two formulas from your memorized list of formulas)
5. Calculate the pH of a solution if its [OH−] = 0.000700 M

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| Start by writing an appropriate formula. Circle the unknown… | Then rearrange to get the unknown alone. | Plug in the known values and solve. |

1. \*\* Calculate the pH and pOH of a 0.025 M solution of [H+]
2. Circle the one compound that would turn litmus paper red.
   1. pure water
   2. 0.10 M C6H12O6(aq)
   3. 0.10 M NaCl(aq)
   4. 0.10 M NaOH(aq)
   5. 0.10 M H2SO4(aq)
3. Circle the one compound that is neither an acid nor a base.
   1. 0.10 M C6H12O6(aq)
   2. 0.10 M H2CO3(aq)
   3. 0.10 M NaOH(aq)
   4. 0.10 M H2SO4(aq)