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| How do Odd Formula Ions Dissolve?  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) | 9.6 | Name\_\_\_\_\_\_\_\_\_  Period\_\_\_\_\_\_\_\_ |

1. Circle the metallic element in each.

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| *Circle any element that is a metal* | This substance is… | When one of these dissolves, how many aqueous ions form? |  | *Circle any element that is a metal* | This substance is… | When one of these dissolves, how many aqueous ions form? |
| CuSO4(s) | ionic / molecular |  |  | Na2C2O4(s) | ionic / molecular |  |
| N2O4((g) | ionic / molecular |  |  | H3PO4 | ionic / molecular |  |

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| *Solved in lecture. If 333 formula units of* Na2C2O4(s)were dissolved, how many anions would form?  How many cations would form? |

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| 1. Draw three aluminum bromides in the left beaker:   AlBr3(s)  AlBr3(s)  AlBr3(s) | http://www.clipartbest.com/cliparts/jix/Gg8/jixGg84iE.png  SOLID |  | http://www.clipartbest.com/cliparts/jix/Gg8/jixGg84iE.png  AQUEOUS |

1. **Draw a slash** through the molecule to show the half that would fall off. How many pieces will this fall apart into if made into an aqueous solution? (circle your choice)

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| KI | 1? 2? 3? 4? 5? | AlBr3 | 1? 2? 3? 4? 5? |
| K2S | 1? 2? 3? 4? 5? | (NH4)2CO3 | 1? 2? 3? 4? 5? |
| MgCO3 | 1? 2? 3? 4? 5? | Ca(CH3COO)2 | 1? 2? 3? 4? 5? |
| Zn(NO3)2 | 1? 2? 3? 4? 5? | CH3OH | 1? 2? 3? 4? 5? |

1. True / False: Mark (T) true or (F) in each blank
   1. \_\_\_\_ solutions are heterogeneous mixtures
   2. \_\_\_\_ solutions are clear
   3. \_\_\_\_ the dissolved substance will eventually settle out of a solution
2. For each, write a BALANNCED dissociation equation (something like "A(s) -> B(aq) + C(aq)") .

IMPORTANT! Include **charges** (+1, +2, etc) and phase notation (s, L, g, aq)

* 1. Powdered K2S(s) dissolving to form an aqueous solution. .

\_\_\_\_\_\_\_\_ --> \_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_

* 1. CO2(s) dissolving.

\_\_\_\_\_\_\_\_ --> \_\_\_\_\_\_\_\_

* 1. Powdered Zn(NO3)2 that has been poured into water and stirred to form a solution

. .

\_\_\_\_\_\_\_\_ --> \_\_\_\_\_\_\_\_ + \_\_\_\_\_\_\_\_

1. If 38 formula units of K2S s)were dissolved, how many cations would form? (The formula and charge of the cation is \_\_\_\_)
2. If 38 formula units of Zn(NO3)2 were dissolved, how many anions would form? (The formula and charge of the anion is \_\_\_\_)
3. Drawings!
   1. In the beaker on the left, draw the indicated solid, repeating the formula three times.
   2. In the beaker on the right, draw what the substance would look like with water added.

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| 1. Draw two ammonium carbonates in each beaker:   (NH4)2CO3  (NH4)2CO3 | http://www.clipartbest.com/cliparts/jix/Gg8/jixGg84iE.png  SOLID |  | http://www.clipartbest.com/cliparts/jix/Gg8/jixGg84iE.png  AQUEOUS |

1. For each molecule below circle a choice to indicate how many particles you would

expect it to form in solution.

(a) C2H3OH 1 particle 2 particles 3 particles 4 particles 5 particles

(b) SO3 1 particle 2 particles 3 particles 4 particles 5 particles

(c) Li3PO4 1 particle 2 particles 3 particles 4 particles 5 particles

(d) FeF3 1 particle 2 particles 3 particles 4 particles 5 particles