|  |  |  |
| --- | --- | --- |
| Colligative PropertiesCλeMis+ry: http://genest.weebly.com Stop in for help every day at lunch and Tues, Weds., &Thurs after school!After-hours question? Email me at home: eagenest@madison.k12.wi.us |  | Name\_\_\_\_\_\_\_\_\_Period\_\_\_\_\_\_\_\_ |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. Fill in the missing blanks to describe each mixture. Remember that the solvent is the thing you have the most of.
 |  | the solution is called: | the solute is: | the solvent is: |
|  | carbonated water (soda) |  |  |
|  |  | oxygen | nitrogen |
|  | lemonade |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 1. Predict the particles that will form in solution
 |  | compound: | Gives these pieces if dissolved |
|  | AlCl3(aq)  |  |
|  | CH3OH(aq)  |  |
|  | Ca(OH)2(aq)  |  |

1. When liquids are impure, their freezing points are (lower/higher) than normal.
2. When liquids are impure, their boiling points are (lower/higher) than normal.

|  |  |  |
| --- | --- | --- |
| **substance** | **boiling point [°C]** | **melting point [°C]** |
| **boron** | **3675** | **2079** |
| **tungsten** | **5660** | **3410** |
| **oxygen** | **-182** | **-218** |

1. If tungsten is made into an alloy by adding copper, what would be a possible boiling point for the alloy?
	1. 5500
	2. 5660
	3. 5700
2. If boron were made into a solution by mixing it with N2 what would be a possible boiling point for the solution?
	1. 3600
	2. 3675
	3. 3700
3. You have 3.05 grams of aluminum nitrate and want to make a 5L of solution. What concentration could you make? 

1. What is the molarity of the solution produced when 145 g of sodium chloride is dissolved in sufficient water to prepare 2.75 L of solution?



1. How many grams of potassium chloride are needed to prepare 0.750 L of 1.50 M KCl?

1. To prepare 10.5 L of 2.50 M potassium hydroxide, how many grams of potassium hydroxide must be used?

For each pair of quantities mark < , =, or >.

|  |  |  |  |
| --- | --- | --- | --- |
| Example: | The temperature in Madison today | \_\_>\_\_ | The temperature on a hot day on Mars |
|  | 1. the melting point of pure ice
 | \_\_\_\_\_\_\_\_ | The melting point of salty ice |
|  | 1. The boiling point of a 0.100 M solution of NaCl
 | \_\_\_\_\_\_\_\_ | The boiling point of a 0.200 M solution of NaCl |
|  | 1. The melting point of a 0.100 M solution of NaCl
 | \_\_\_\_\_\_\_\_ | The melting point of a 0.200 M solution of NaCl |