|  |  |  |
| --- | --- | --- |
| Working Backwards to Find a FormulaCλeMis+ry: http://genest.weebly.com Stop in for help every day at lunch and Tues &Thurs after school! |  | Name\_\_\_\_\_\_\_\_\_\_\_\_\_Period\_\_\_\_\_\_\_\_\_\_\_\_\_ |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1. Can you see a molecule? \_\_\_\_\_\_\_\_\_\_
2. Explain why \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Can you count the molecules by looking at a chemical reaction? \_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_1. What does Avogadro’s Principle tell us about the number of particles in the four balloons shown below?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (each balloon contains one substance, an element. There are no compounds.)

|  |  |  |  |
| --- | --- | --- | --- |
| 2.999 liters of SubstanceA184 grams | 2.999 liters of SubstanceB23 grams | 2.999 liters of SubstanceC276 grams | 2.999 liters of SubstanceD943 grams |

 | 1. IF we arbitrarily choose **the lightest substance** and divide the others by it, we can get relative ratios of the mass of single pieces. Do this for each substance.
	1. Relative Mass of Substance A
	2. Relative Mass of Substance B
	3. Relative Mass of Substance C
	4. Relative Mass of Substance D
 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  1. What does Avogadro’s Principle tell us about the number of particles in the four balloons shown below?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (each balloon contains one substance, an element. There are no compounds.)

|  |  |  |  |
| --- | --- | --- | --- |
| 2.999 liters of SubstanceE85 grams | 2.999 liters of SubstanceF221 grams | 2.999 liters of SubstanceG17 grams | 2.999 liters of SubstanceH102 grams |

 | 1. IF we arbitrarily choose **the lightest substance** and divide the others by it, we can get relative ratios of the mass of single pieces. Do this for each substance.
	1. Relative Mass of Substance E
	2. Relative Mass of Substance F
	3. Relative Mass of Substance G
	4. Relative Mass of Substance H
 |

1. State Proust’s Law: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_