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| Math Practice for the January Final Exam #2  East.H.S. ©λ€M|5+rγ |  | Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  visit http://genest.weebly.com |

The most useful single item to review all of the old Review sheets on our website

However, this sheet you are holding is good for practicing some of the math problems that will be on the test.

1. What would be the new pressure if 350 cm3 of gas at standard pressure is compressed to a volume of 150. cm3?
2. Sam’s bike tire contains 15 units of air particles and has a volume of 160mL. Under these conditions the pressure reads 13 psi. Sam pumps in 2.0 units of air using a pump and the volume stretches to 170 mL. What would the tire pressure be now?
3. In each case, assume ambient pressure is 740 mmHg. Solve for the pressure inside the flask.



1. In each case, assume pressure inside the flask is 880mmHg. Solve for the ambient pressure.



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| ***For the next two questions, use the graphs below.*** |
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| 1. Which graph represents the relationship between the pressure of a gas and the absolute temperature? |
| 1. Which graph represents the relationship between the pressure of a gas and its volume? |

1. Name three special things about kelvins that make them more useful for science than degrees Celsius.
2. How many silver atoms are contained in 0.650 grams of silver?

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1. If 13.6. grams of metal were dropped into 28.5 grams of water calculate the following

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|  | 16°C water  92°C metal  35°C water  35°C metal | 1. Find ∆T for the water. 2. How many joules of heat entered the water? 3. Find ∆T for the metal |

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| 1. Given info: You buy a used car and in the trunk find an Tupperware tub with a substance. When analyzed it has6.93g of oxygen and 0.43 g of hydrogen. If the molar mass of the compound is 34.0 g/mole, what is the molecular formula? | Find the empirical formula | |
| Find what the mass would be for a mole of this **empirical** formula. | | Now randomly choose a few integers and multiply your empirical mass by them.  Write the molecular formula here \_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. What is the percent by mass of Ca in calcium chloride, CaCl2?
2. If you have 505 μL, how many L do you have?
3. If you have 0.34 μm, how many picometers do you have?