

Gases Warm-ups.notebook

1. Physical Properties Review

1. When does boiling occur? (note: has nothing to do with temp)
2. What does NORMAL BOILING POINT mean?
3. Classify the following as exo or endo thermic:
 - a) Freezing
 - b) Melting
 - c) Boiling
 - d) Sublimation

2. Gases in the Atmosphere

1. What are the 4 most abundant gases in the atmosphere? Give their approximate percentages.
2. What does the ozone layer do?
3. How do greenhouse gases contribute to rising global temperatures?

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3. Pressure

1. Define pressure
2. Give 3 ways in which you feel pressure (not peer pressure)
3. Some gas is trapped in a syringe. If the volume of the gas is reduced, what do you think will happen to the pressure? Explain why at the particle level.

4. Pressure

1. Define pressure.
2. a) If the volume of a gas is increased, what happens to the pressure?
b) Is this inverse or direct?
3. Convert 750mmHg to Pa.

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5. Boyle's Law (P-V)

1. A gas has a volume of 200mL at 1.5 atm of pressure. If the pressure is lowered to 700mmHg, find the new volume.

2. A gas has a volume of 200mL at 760mmHg. If the volume is changed to 450mL, what is the pressure (in kPa)?

6. Boyle's Law/Theory

1. What is the difference between a barometer and a manometer?

2. Give 2 effects of a rise in global temperatures.

3. A gas has a pressure of 101.3kPa and a volume of 2L what would be the volume if the pressure was raised to 2.5atm?

7. Boyle's Law

A gas has a volume of 200mL at 760mmHg. If the volume is changed to 450mL, what is the pressure (in kPa)?

8. Boyle's Law (PV), Charles' Law (VT)

2L of a gas has a pressure of 1.5 atmospheres. If the pressure is changed to 800mmHg, find the new volume.

A gas has a volume of 30mL, how do you think the volume would change if the temperature were doubled?

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9. Boyle's Law (PV), Charles' Law (VT)

A gas has a pressure of 1 atmosphere and a volume of 30mL. If the pressure is changed to 600mmHg, find the new volume.

At 30 degrees celsius a gas has a volume of 25mL. What would the temperature have to be in order to change the volume to 45mL?

10. Boyle's Law (PV), Charles' Law (VT), Gay-Lussac's Law (PT)

1. 500.0 mL of a gas is collected at 745.0 mm Hg. What will the volume be at standard pressure?

2. What would be the new volume if the temperature on 450 mL of gas is changed from 45°C to -5°C?

3. A sample of a gas has a pressure of 1.07 atm at a temperature of 120°C. What will the pressure be at a temperature of 205°C if the volume remains the same?

11. Combined Gas Law

A gas has a volume of 800mL at -23°C and 300mmHg. What would the volume of the gas be at STP?