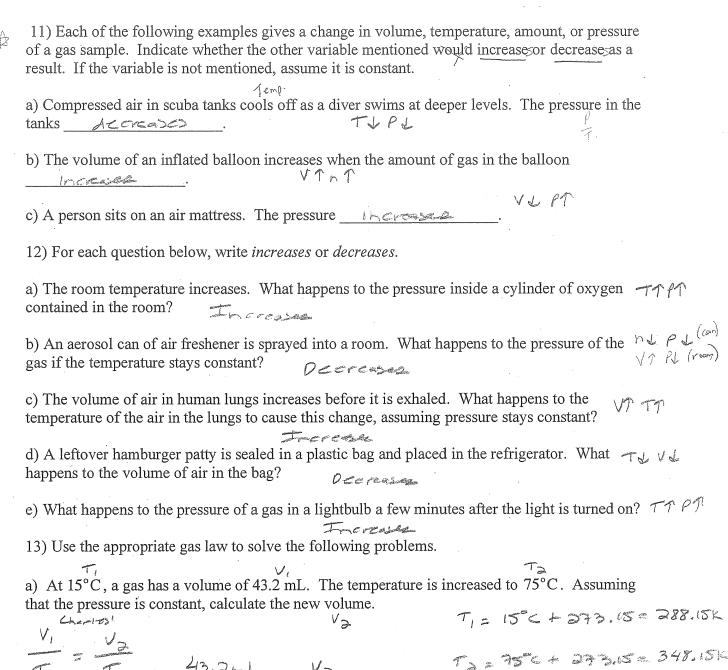
Name	_Date	Perio	od	
Review: States of Matter a	and The Gas La	ws Exam		
1) The temperature of Substance A is 50°C. The	temperature of S	Substance B is 3	20 K.	
a) Which substance is hotter? 5 who to a	- A			
b) Which substance has a greater average	kinetic energy?	Substance	A	
2) Summarize what happens in each phase chang	e.			
a) Condensation Gas to Liquid				
b) Deposition Gas to Solid				
c) Freezing Liquid to Salid				
d) Melting Solid to Liquid				
e) Sublimation Society To Gas				
f) Vaporization Liquid to Gas		•		
3a) What temperature is absolute zero?			•	
b) What happens at this temperature? All m	efter Stops	1 even ha	e (e all es	the sections
4a) Define Heat of Fusion. Energy required to meth 1	trate of	i Comment		
b) Define Heat of Vaporization.	merce l'accertant	H30 Pres		
5) What is the difference between a crystalline so	lid and an amorp		and the	To grace of the standard
6) Summarize the Kinetic Theory of Gases.				
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7) The following statements are false. Underline what makes them false statements, and change the underlined items so that the statements are true.
a) Standard conditions when working with gases are 0 K and 1 p.s.i.
b) When using a gas law, if temperature is given in Celsius, it must be converted to Fahrenheit.
8) The Ideal Gas Law is $PV = nRT$.
a) State what each variable represents.
P: Pressure V: Volume n: males R: constant T: Tem
b) Keep "n, R and T" constant to derive Boyle's Law: $P_i V_i = P_a V_a$
According to Boyle's Law, as pressure
c) Keep "n, R and " constant to derive Charles' Law:
According to Charles' Law, as temperature, volume, volume, volume
d) Keep "n, R and V" constant to derive Amonton's Law:
According to Amonton's Law, as temperature, pressure, pressure,
e) Keep "R, T and P" constant to derive Avogadro's Law: $\frac{V_1}{h_1} = \frac{V_2}{h_2}$
According to Avogadro's Law, as moles, volume, volume, volume
9a) What is the Combined Gas Law? $\frac{P_1V_1}{T_1} = \frac{P_2V_3}{T_2}$
b) What gas laws are combined to form the Combined Gas Law?
Boole's, Cherres, Amenton's
10) Which of the following expresses Avogadro's Principle. (a) Equal volumes of gases at the same temperature and pressure contain equal number of particles. (b) One mole of any gas will occupy a certain volume at STP.

- c) STP stands for standard temperature and pressure.d) The molar volume of gas is the volume that one mole occupies at STP.



b) At 4.56 atm, the volume of a gas is 34.3 L. The pressure is reduced to 1.23 atm. What is the new volume, assuming the temperature remains constant.

$$P_1V_1 = P_0V_2$$
 (4.52 atm) (34.32) = (1.23 atm) (V_a)

Va = 52 m L 1

A post topical

+ +273.15=287.15Kp

c) Find the number of moles of CO₂ gas if you have 23.6 mL at 14°C and the pressure is 0.82 atm. How many molecules of CO2 do you have?

n= 6.82 males 60

10.82 mal Cas | 6.02 x 13 male - 4.7 × 10 make 1

d) A gas has a pressure of 12 atm at 215°C. What will its pressure be at 35°C if the volume remains constant. remains constant.

1.23 e) Calculate the volume that 6.21 moles of Br₂ at 33.1°C and 891 mbar will occupy.

1.23 25

V= 127 L