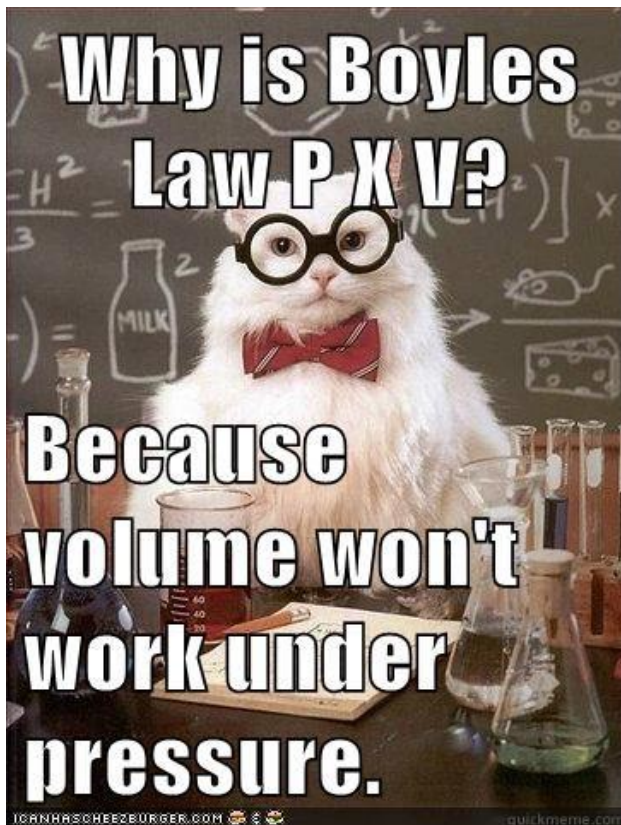


Gases and the KMT



Name _____

Test Date _____

Gas Law

Vocabulary to know

Terms	Definition
Pressure	
Barometer	
STP	
Absolute zero	
Gas Laws	
Expansion	
Density	
Fluidity	
Compressibility	
Diffusion	
Effusion	
volatile	
Non volatile	
Boiling/Vaporization	
Evaporation	

Units of Pressure

The Kinetic Molecular Theory

The 4 factors that affect the behavior of gases are

- 1)
- 2)
- 3)
- 4)

Assumptions of the KMT:

- 1) Gases consist of _____ that are _____.
- 2) Collisions between particles are _____-elastic collisions:
- 3) Gas particles are in _____, rapid, _____ motion and possess _____ (_____)
- 4) There are _____ of _____ or _____ . They behave like _____.
- 5) Kinetic energy depends upon _____.

Try It: Pressure Unit Conversion

- 1)
- 2)
- 3)
- 4)

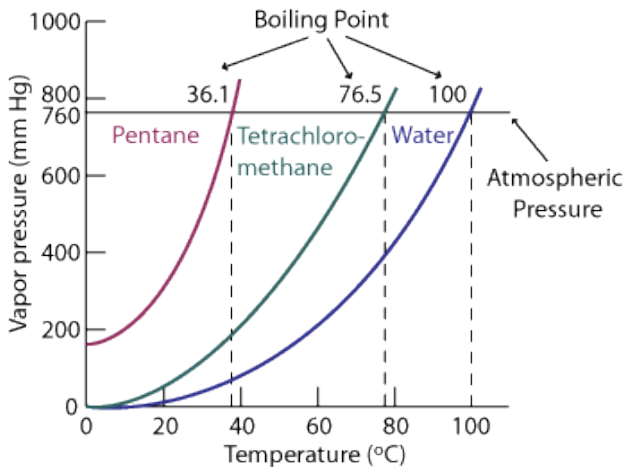
Vapor Pressure:

*

*

Vapor Pressure Curves:

(explain the curve using the terms volatile, non-volatile, IMF)

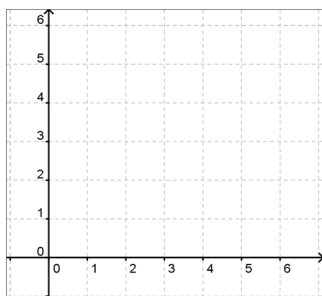


The Gas Laws

Boyle's Law:

Definition _____

Relationship _____



Graph:

Formula:

Try It:

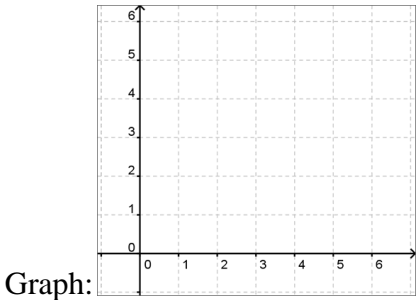
P₁	
V₁	
P₂	
V₂	
Work:	
Answer:	

P₁	
V₁	
P₂	
V₂	
Work:	
Answer:	

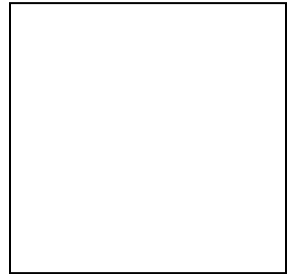
Charles Law:

Definition _____

Relationship _____



Formula:



Try It!

V₁	
T₁	
V₂	
T₂	

Work:

Answer:

V₁	
T₁	
V₂	
T₂	

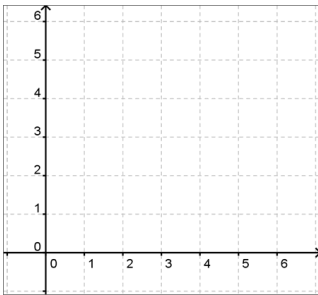
Work:

Answer:

Gay Luasaac's Law:

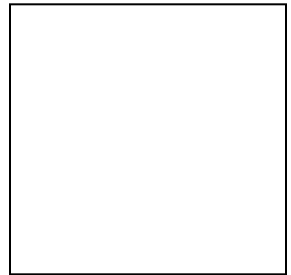
Definition _____

Relationship _____



Graph:

Formula



Try It

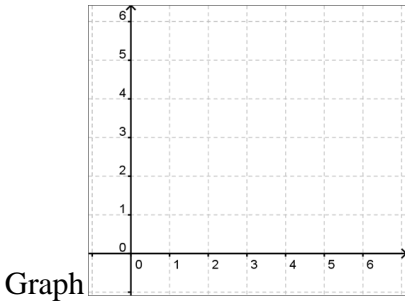
T₁	
P₁	
T₂	
P₂	
Work:	
Answer:	

T₁	
P₁	
T₂	
P₂	
Work:	
Answer:	

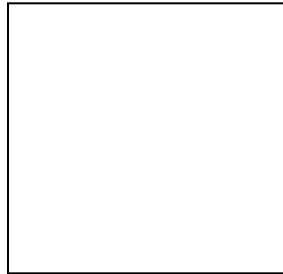
Avogadro's Law

Definition _____

Relationship _____



Formula:



Try It!

V_1	
n_1	
V_2	
n_2	
Work:	
Answer:	

Mix it up:

Directions: Identify the law and solve the problem in the space below.

1) Law _____

2) Law _____

3) Law _____

4) Law _____

Combined Gas Law

Definition: _____

Formula:

Try It!

V_1	
T_1	
P_1	
V_1	
P_1	
T_1	
Work:	
Answer:	

Try It!

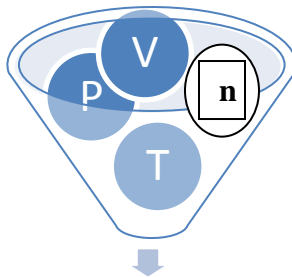
V_1	
T_1	
P_1	
V_1	
P_1	
T_1	
Work:	
Answer:	

Ideal Gas Law

Definition _____

Formula:

R is _____



Ideal Gas Formula

Use the _____ units to help you determine the R value

R=

R=

R=

Try It:

P	
v	
n	
R	
T	
Work:	
	Answer:

The Following Table is being used for ammonia gas (NH₃)

Pressure	Volume	Temperature		Moles	Grams	R value
2.50 atm		0 °C			32.0 g	
			K			
_____ kPa	75.0 mL	30 °C		.0226 mol		
			K			
768 mmHg	6.0 L	100°C				
			K			
195 kPa	2.75 L				45.0 g	
			K			

Dalton's Law of Partial Pressures

Formula:

Try It:

-Collecting Gas Over water:

Formula:

Try It: