

CONCEPT: THE IDEAL GAS LAW APPLICATIONS

- By rearranging *The Ideal Gas Law* we can establish direct and inverse relationships between its variables.

Ideal Gas Law Applications

Ideal Gas Law Formula

$$PV = nRT$$

Variables Chart

	P	V	n	T
P				
V				

Variable Relationships

- ☐ P & V = _____ proportional.
- ☐ P & n = _____ proportional.
- ☐ P & T = _____ proportional.
- ☐ V & n = _____ proportional.
- ☐ V & T = _____ proportional.

EXAMPLE: If the number of moles (n) inside a container were tripled while keeping the pressure (P) constant, what will happen to the volume (V)?

- a) It will remain the same b) It will be cut by a third c) It will triple d) It will double

PRACTICE: The relationship between the partial pressure of a gas (P) and the number of moles of that gas (n) is best represented by which of the following graphs?

