

KEY - GAS LAW EQUATION PRACTICE (#1)

1) Main ones: atm, kPa, mm Hg, torr, psi

2) Any cubic linear distance, any metric derivation of liters

Examples: m³, cc, mL

3) Indirectly proportional.

When P increases, V decreases. When P decreases, V increases.

$$4) \quad P_1 = \frac{P_2 V_2}{V_1}$$

$$6) \quad V_1 = \frac{P_2 V_2}{P_1}$$

$$5) \quad P_2 = \frac{P_1 V_1}{V_2}$$

$$7) \quad V_2 = \frac{P_1 V_1}{P_2}$$

8) Kelvin (K)

9) Directly proportional.

When V increases, T increases. When V decreases, T decreases.

$$10) \quad V_1 = \frac{V_2 T_1}{T_2}$$

$$12) \quad V_2 = \frac{V_1 T_2}{T_1}$$

$$11) \quad T_1 = \frac{V_1 T_2}{V_2}$$

$$13) \quad T_2 = \frac{T_1 V_2}{V_1}$$

14) Directly proportional.

When P increases, T increases. When P decreases, T decreases.

$$15) \quad P_1 = \frac{P_2 T_1}{T_2}$$

$$16) \quad T_1 = \frac{P_1 T_2}{P_2}$$

$$17) \quad P_2 = \frac{P_1 T_2}{T_1}$$

$$18) \quad T_2 = \frac{T_1 P_2}{P_1}$$

19) number of moles

20) it varies with the pressure unit (atm, mm Hg, kPa)

$$21) \quad P = \frac{nRT}{V}$$

$$26) \quad V_1 = \frac{P_2 V_2 T_1}{T_2 P_1}$$

$$22) \quad V = \frac{nRT}{P}$$

$$27) \quad T_1 = \frac{P_1 V_1 T_2}{P_2 V_2}$$

$$23) \quad n = \frac{PV}{RT}$$

$$28) \quad P_2 = \frac{P_1 V_1 T_2}{T_1 V_2}$$

$$24) \quad T = \frac{PV}{nR}$$

$$29) \quad V_2 = \frac{P_1 V_1 T_2}{T_1 P_2}$$

$$25) \quad P_1 = \frac{P_2 V_2 T_1}{T_2 V_1}$$

$$30) \quad T_2 = \frac{T_1 P_2 V_2}{P_1 V_1}$$