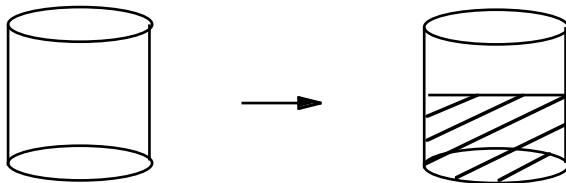


NAME: _____
Gas Behavior / Chem120 / Dr. Rusay

An Ideal gas
in a cylinder



$$V_1$$

$$V_2 = 1/2 V_1$$

Something(s) happen(s)

What can be going on?

Case 1:

$$P_1 = 760 \text{ torr}$$
$$T_1 = 298 \text{ K}$$

$$P_2 = ?$$
$$T_2 = 298 \text{ K}$$

Case 2:

$$P_1 = 1 \text{ atm}$$
$$T_1 = 25 \text{ }^\circ\text{C}$$

$$P_2 = 101,325 \text{ Pa}$$
$$T_2 = ?$$

Case 3:

$$P_1 = 1 \text{ atm}$$
$$T_1 = 273 \text{ }^\circ\text{C}$$

$$P_2 = 0.50 \text{ atm}$$
$$T_2 = ?$$

Others:

$$P_1 = 760 \text{ mm Hg}$$
$$T_1 = 298 \text{ K}$$

$$P_2 = ?$$
$$T_2 = 68.25 \text{ K}$$

Double the pressure:

$$P_1 = 760 \text{ torr} \qquad P_2 =$$
$$T_1 = 273 \text{ K} \qquad T_2 =$$

Double the temperature:

$$P_1 = 2.5 \text{ atm} \qquad P_2 =$$
$$T_1 = 298 \text{ K} \qquad T_2 =$$
