

Solutions

Each answer shows the steps, then the **result**.

2.1

- $27 + 273 = 300 \text{ K}$

2.2

- $n = \frac{PV}{RT} = \frac{(2.0)(10.0)}{(0.08206)(300)} = 0.81 \text{ mol}$

2.3

- $P_2 = \frac{P_1 V_1}{V_2} = \frac{(1.0)(2.0)}{0.5} = 4.0 \text{ atm}$

3.1 B

- kelvin

3.2

(a)

- $P = \frac{nRT}{V} = \frac{(0.25)(0.08206)(350)}{5.0} = 1.44 \text{ atm}$

(b)

- The pressure doubles

3.3

- $\frac{V_1}{T_1} = \frac{V_2}{T_2}; V_2 = 2.0 \times \frac{360}{300} = 2.4 \text{ L}$