

37.)

$$p_1 = 40 \text{ bar} = 4 \cdot 10^6 \text{ Pa}$$

$$T_1 = 37^\circ\text{C} = 310 \text{ K}$$

$$n_2 = \frac{n_1}{2}$$

$$T_2 = 12^\circ\text{C} = 285 \text{ K}$$

$$p_2 = ?$$

$$V = \text{all}$$

$$\boxed{pV = nRT}$$

$$pV = nRT \quad \underline{\text{all}}$$

$$\frac{p}{nT} = \frac{R}{V} = \underline{\text{all}}$$

$$\frac{p_1}{n_1 T_1} = \frac{p_2}{n_2 T_2}$$

$$\underline{p_2} = \frac{n_2}{n_1} \frac{T_2}{T_1} p_1 = \dots$$