

### Answer on Question #77230, Chemistry / General Chemistry

At what temperature do 0.024805mol of Ne in a 972.9 ml container exert a pressure of 0.76 atm?

#### Solution

The ideal gas law says:

$$PV = nRT, \text{ where } R = 0.082 \text{ L}\cdot\text{atm}\cdot\text{mol}^{-1}\cdot\text{K}^{-1}$$

Find the temperature

$$T = \frac{PV}{nR} = \frac{0.76 \times 0.9729}{0.024805 \times 0.082} = \mathbf{363.5 \text{ (K)}}$$

#### Answer

0.024805mol of Ne exert a pressure of 0.76 atm in a 972.9 ml container at **363.5 K**.