SchoolNova Chem 2 Class 10 Homework

Potentially useful equations:

PV=nRT $(P_1V_1)/T_1=(P_2V_2)/T_2$ R=0.0821 (L·atm)/(mol·K)   K = ℃ + 273

1. How many moles of CO are in 1.0 L of air at standard temperature and pressure (STP)?

    Hint: STP defines T = 273 K and P = 1 atm

2. A helium balloon is inflated to a volume of 4.5 L at 23℃. If the balloon is then placed in

    the freezer at -10℃, what is the new volume?

3. At very low pressures and temperatures, gases behave ideally. However, if the pressure is

    increased while the temperature remains very low, PV>nRT. Why might this occur

    physically and quantitatively?