Answer on Question#37486 - Chemistry - Other

Question:

A 20.0L gas cylinder is filled with 8.60moles of gas. The tank is stored at 45∘C. What is the pressure in the tank? Express your answer to three significant figures and include the appropriate units.

Solution:

The common form of ideal gas law is:

$$pV = nRT$$

From this equation we can find the pressure in the tank:

p(Pa) = 8.60*8.31*(273.15 + 45)/0.02 = 1136845.395 = 1.14 MPa

Answer: 1.14 MPa