

Calculate

Boyle $P_1 \times V_1 = P_2 \times V_2$

4) A gas is compressed from 7.75 m³ at 1.27 atm to 15.0 m³ without changing the temperature. What pressure will the gas exert after the change?

P₁ =

V₁ =

P₂ =

V₂ =

5) If 5350 L of gas are collected at a pressure of 85.5 kPa, what volume will the same gas occupy at standard atmospheric pressure, assuming the temperature remains the same?

P₁ =

V₁ =

P₂ =

V₂ =

6) Temperature conversions: °C = K - 273 K = °C +273

a) 980 °C = _____ K (Kelvin) b) 980 K = _____ °C c) 65 °C = _____ K

c) What is the lowest possible Kelvin temperature _____ and Celsius temperature _____

d) The SI unit for temperature is _____. The SI unit for pressure is _____.

7) STP means _____ and refers to ___ atm and ___ °C.

Choose from

increases decreases stays the same cannot be determined (may be more than once)

8) When the temperature inside a container decreases (pressure constant) the volume _____.

9) When the volume of a container decreases (temperature constant) the pressure inside _____.

10) When the number of gas particles in a closed rigid container decreases, the pressure _____.

11) What are three ways to increase the pressure in a balloon: _____