## Answer on the Question #43695, Chemistry, Physical Chemistry

**Question:**

At a constant temperature, a gas is at a pressure of 1080 mm Hg. If the volume is decreased by 40%, find the new pressure of the gas.

**Solution:**

If the starting volume is V, the new volume is 0.6V. According to Boyle's law:

$$p_1V_1 = p_2V_2$$

The new pressure of the gas:

$$p_2 = \frac{p_1V_1}{V_2} = \frac{1080 * V}{0.6V} = 1800\ mm\ Hg$$

**Answer:** 1800 mm Hg