

Questions of the Day Set #8

#86

How many atmospheres are equal to 772.3 mm Hg?
(A) 586,900 (B) 0.9841 (C) 1.016 (D) 102.9

#88

What is the pressure of a 1.28 mole gas sample in a 14.3 liter container at 25.0°C?

(A) 0.184 atm

(B) 0.457 atm

(C) 5.44 atm

(D) 2.19 atm

#90 A compound contains 46.7 % nitrogen and 53.3 % oxygen by mass. What is the empirical formula of the compound?
(A) NO (B) N₂O (C) N₂O₃ (D) N₂O₅

#92

A gas sample has a volume of 25.0 mL at 1.00 atm pressure. If the volume increases to 50.0 mL, the new pressure will be

(A) 1.00 atm

(B) 2.00 atm

(C) 0.250 atm

(D) 0.500 atm

#94

Given the reaction at STP: $2 \text{C}_2\text{H}_2 + 5 \text{O}_2 \rightarrow 4 \text{CO}_2 + 2 \text{H}_2\text{O}$

What is the total number of liters of O₂ gas needed to completely react with 0.500 moles of C₂H₂?

(A) 16.8 L

(B) 28.0 L

(C) 40.0 L

(D) 56.0 L

#96

A cylinder is filled with 2.00 moles of nitrogen, 3.00 moles of argon, and 5.00 moles of helium. If the gas mixture is at STP, what is the partial pressure of the argon?

(A) 760. torr (B) 380. torr (C) 228 torr (D) 152 torr