

3.06 2 step mole conversions

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1. What is the total volume occupied by 132 grams of $\text{CO}_2(\text{g})$ at STP?
A) 22.4 L B) 33.6 L
C) 44.8 L D) 67.2 L
 2. At STP, what is the total volume occupied by a 2.00-gram sample of $\text{H}_2(\text{g})$?
A) 1.00 L B) 2.00 L
C) 11.2 L D) 22.4 L
 3. The volume occupied by 9.03×10^{23} molecules of N_2 gas at STP is closest to
A) 0.500 liter B) 1.50 liters
C) 22.4 liters D) 33.6 liters
 4. What is the total volume, in liters, occupied by 56.0 grams of nitrogen gas at STP?
A) 11.2 B) 22.4 C) 33.6 D) 44.8
 5. Which quantity contains a total of 3.01×10^{23} molecules of Cl_2 at STP?
A) 11.2 l B) 70.0 g
C) 22.4 l D) 17.0 g
 6. Which quantity of N_2 gas has a volume of 11.2 liters at STP?
A) 1.0 mole B) 2.0 moles
C) 14.0 grams D) 28.0 grams
 7. What mass of carbon dioxide occupies a volume of 22.4 liters at STP?
A) 22.0 g B) 44.0 g
C) 66.0 g D) 88.0 g
 8. At STP, 44.8 liters of CO_2 contains the same number of molecules as
A) 1.00 mole of He B) 2.00 moles of Ne
C) 0.500 mole of H_2 D) 4.00 moles of N_2
 9. What is the volume occupied by 11.0 grams of a gas at STP if the molecular mass of the gas is 44.0?
A) 5.60 L B) 11.2 L
C) 22.4 L D) 89.6 L
 10. What would be the volume of 0.500 mole of an ideal gas at STP?
A) 0.500 L B) 11.2 L
C) 22.4 L D) 44.8 L
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