WS 3.3: Mole Conversions (one step)

Directions: Answer the following questions. Set-up all problems using the factor-label method of dimensional analysis and show all your work and units.

1. How many atoms are in 1.5 moles of neon?

2. How many moles of SF_6 are there in 4,595,000,000,000,000,000 molecules of SF_6?

3. Calculate the number of moles in 5.45×10^{25} atoms of Zn

1. What is the mass of 7.50 moles of sulfur dioxide (SO_2)?

2. How many moles are there in 250.0 grams of sodium phosphate (Na_3PO_4)?

3. How many grams of potassium sulfate (K_2SO_4) are there in 25.3 moles?

4. Calculate the number of grams in 3.25-mol of $AgNO_3$

5. What is the volume of 0.38 moles of any gas at STP?

6. Calculate the number of moles in 32.2-L of NH_3

7. What is the mass of 51 liters of oxygen gas?