Moles Homework
Honors Chemistry

1)   How many grams are there in 4.5 moles of copper (II) chloride?

2)   How many moles are there in 4.5 x 10^{24} molecules of boron trichloride?

3)   How many molecules are there in 45 moles of diphosphorus trioxide?

4)   How many molecules are there in 23 grams of sulfur dioxide?

5)   How many ions are present in 83 grams of ammonium nitrate?

6)   How many molecules are in 450 grams of oxygen?

7)   How many grams are in 1.0 x 10^{24} molecules of SiO_2?

8)   How many molecules are there in 2280 grams of methane?

9)   Using your knowledge of mole calculations and unit conversions, determine how many atoms there are in 1 gallon of gasoline. Assume that the molecular formula of gasoline is C_6H_{14} and that the density of gasoline is approximately 0.85 grams/mL.