More Mole Practice Conversions

1. What is the mass of $1.20 \times 10^{23}$ atoms of Na?

2. How many individual atoms are present in 11.5 grams of Na?

3. What is the mass in grams of 0.50 mole of sulfur?

4. How many individual atoms are in 32 grams of oxygen?

5. How many moles are in 281 grams of Si?
6. Calculate the molar mass of each of the following formulas.
   a. HCl

   b. SiH₄

   c. C₃H₆O₂

   d. N(CH₃)₃

7. How many grams are in 3.4 moles of HCl?

8. How many moles are in 8.5 grams of SiH₄?

9. How many molecules (not moles) are in 144 grams of C₃H₆O₂?

10. How many moles are in a 0.450 gram sample of N(CH₃)₃