Worksheet: Mole Problems

Part 1: Molar Mass
Use the periodic table to find the molar masses of the following.

- HCl
- $\text{K}_2\text{CO}_3$
- $\text{Ca(OH)}_2$
- $\text{Na}_3\text{PO}_4$

Part 2: Mole Conversions
Work each of the following problems. SHOW ALL WORK.

1. How many atoms are in 6.2 moles of aluminum?

2. Convert $5.3 \times 10^{25}$ molecules of $\text{CO}_2$ to moles.

3. How many formula units of sodium acetate are in 0.87 moles of sodium acetate?

4. Convert 3.55 moles NaCl to formula units.
5. Convert 3.00 moles \( \text{As}_2\text{S}_3 \) to grams.

6. How many moles are represented by 11.5 g of \( \text{C}_2\text{H}_5\text{OH} \)?

7. What is the mass of 9.30 moles of \( \text{SiH}_4 \)?

8. Convert \( 8.00 \times 10^{20} \) molecules of \( \text{H}_2 \) to moles.

9. How many atoms of tin are found in 3.50 moles of tin?

10. How many grams of tin are found in 3.50 moles of tin?

Bonus: How many atoms of hydrogen are found in 12.6 moles of water?