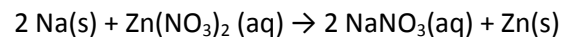


Pre-AP Chemistry
Unit #9—Stoichiometry

Moles to Atoms/Molecules and Atoms/Molecules to Moles



1. Write the twelve mole ratios for the chemical reaction.
2. How many moles of sodium are needed to react completely with 6.313×10^{24} molecules of zinc nitrate?
3. If 15.88 moles of Zn are produced in the above reaction, how many atoms of sodium were reacted?
4. How many moles of sodium nitrate are produced if the reaction calls for 1.915×10^{25} atoms of solid sodium?
5. If 75 moles of zinc nitrate are needed in the above reaction, how many atoms of zinc metal were produced?