

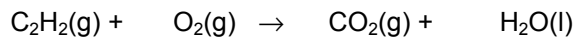
Name :

Honors Chemistry

Section :

Mole-Mole Problems

1. After balancing the following equation, complete the table.



Moles				
Gfm				
Total Mass (mol x gfm)				
Volume (for gases)				

(Excluding the gfm row, everything in this chart gives stoichiometric relationships.)

2. Explain the term *mole ratio* in your own words. When would you use it?
3. The formation of aluminum oxide from its constituent elements is represented by this equation: 4
 $\text{Al} + 3 \text{O}_2 \rightarrow 2 \text{Al}_2\text{O}_3$
- Write the six mole ratios that can be derived from this equation.
 - How many moles of aluminum are needed to form 3.7 moles of Al_2O_3 ?
 - How many moles of oxygen are required to react completely with 14.8 mol of Al? (Use factor label.)
 - Calculate the number of moles of Al_2O_3 formed when 0.78 mol of O_2 reacts with aluminum.