#### **MOLE TO MOLE CONVERSION**

In the first set of boxes, indicate what color will represent each element. Balance each equation and tally each element in the boxes below the equation. Finally, convert the moles in the problem that follows (show your work).

N



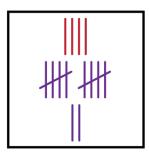
Н



O

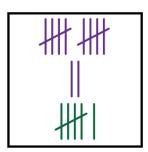


## 1. $4NH_3 + 5O_2 \rightarrow 4NO + 6H_2O$







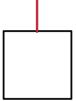


a. How many moles of O<sub>2</sub> do you need to make 14 moles of NO? \_\_\_\_\_

Fe



(



2. 4Fe +  $3O_2 \rightarrow 2Fe_2O_3$ 







b. How many moles of Fe do you need to make 28 moles of Fe<sub>2</sub>O<sub>3</sub>? \_\_\_\_\_

Ca



C



Н



P



### 3. $3Ca(OH)_2 + 2H_3PO_4 \rightarrow 1Ca_3(PO_4)_2 + 6H_2O$









c. How many moles of H<sub>3</sub>PO<sub>4</sub> do you need to make 4 moles of H<sub>2</sub>O? \_\_\_\_\_

Αl

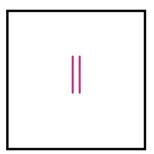


H



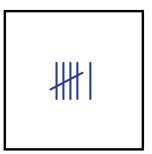


# 4. $2AI + 6HCI \rightarrow 2AICI_3 + 3H_2$









d. How many moles of Al do you need to make 132 moles of AlCl<sub>3</sub>?m

N



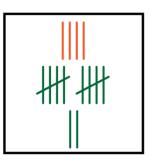
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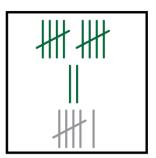


### 5. $4NH_3 + 5O_2 \rightarrow 4NO + 6H_2O$









e. If you had 55 moles of O<sub>2</sub> how many moles of NO did you produce? \_\_\_\_\_

C



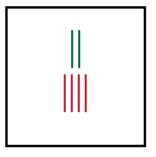
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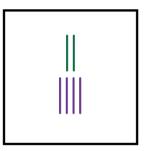
O

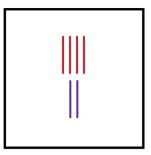


6.  $1C_2H_4 + 3O_2 \rightarrow 2CO_2 + 2H_2O$ 









f. How many moles of O<sub>2</sub> do you need to make 77 moles of CO<sub>2</sub>?