Name: \_\_\_\_\_

## **Stoichiometry: Mole-Mole Problems**

| $1. N_2 + 3H_2 \rightarrow 2NH_3$  |
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| How many moles of hydrogen are needed to completely react with 2.00 moles of nitrogen?   |
| <ul> <li>2. 2KClO<sub>3</sub> → 2KCl + 3O<sub>2</sub><br/>How many moles of oxygen are produced by the decomposition of 6.00 moles of potassium chlorate?</li> </ul>         |
| 3. $Zn + 2HCl \rightarrow ZnCl_2 + H_2$  |
| How many moles of hydrogen are produced from the reaction of 3.00 moles of zinc with an excess of hydrochloric acid?   |
| 4. $C_3H_8 + 5O_2 \rightarrow 3 CO_2 + 4H_2O$  |
| How many moles of oxygen are necessary to react completely with 4.00 moles of propane $(C_3H_8)$ ?   |
| 5. $K_3PO_4 + Al(NO_3)_3 \rightarrow 3 KNO_3 + AlPO_4$   |
| How many moles of potassium nitrate are produced when 2.00 moles of potassium phosphate react with 2.00 moles of aluminum nitrate? (2 problems, determine for each reactant) |