

Choice Board - Template

Complete one box from each column.

Choice Board - Stoichiometry

Complete one box from each column. Use the blank table on the next page to record your solutions.

Mole-to-Mole Conversions Use mole ratios to calculate moles of products and reactants.	Molar Mass Calculate molar mass (Hint: Have a periodic table nearby!)	Moles to Grams Conversions Use molar mass to convert between grams and moles.
1. $2\text{KClO}_3 \rightarrow 2\text{KCl} + 3\text{O}_2$ How many moles of oxygen are produced by the decomposition of 6.0 moles of potassium chlorate, KClO_3 ?	1. NaBr 2. PbSO_4 3. Ca(OH)_2	1. $\text{Mg(s)} + 2\text{HCl(aq)} \rightarrow \text{MgCl}_2\text{(aq)} + \text{H}_2\text{(g)}$ How many grams of HCl are consumed by the reaction of 2.50 moles of magnesium?
2. $\text{Zn} + 2\text{HCl} \rightarrow \text{ZnCl}_2 + \text{H}_2$ How many moles of hydrogen are produced from the reaction of 3.0 moles of zinc?	1. Na_3PO_4 2. $(\text{NH}_4)_2\text{CO}_3$ 3. $\text{C}_6\text{H}_{12}\text{O}_6$	2. $3\text{Mg} + 1\text{Fe}_2\text{O}_3 \rightarrow 2\text{Fe} + 3\text{MgO}$ How many moles of iron, Fe, are produced with 25.0 grams of magnesium, Mg?
3. $\text{C}_3\text{H}_8 + 3\text{O}_2 \rightarrow 3\text{CO}_2 + 4\text{H}_2\text{O}$ How many moles of oxygen are necessary to react completely with 4.0 moles of propane (C_3H_8)?	1. $\text{Fe}_3(\text{PO}_4)_2$ 2. $(\text{NH}_4)_2\text{S}$ 3. AgF	3. The following reaction produces Acetylene gas (C_2H_2) $\text{CaC}_2\text{(s)} + 2\text{H}_2\text{O(l)} \rightarrow \text{C}_2\text{H}_2\text{(g)} + \text{Ca(OH)}_2\text{(aq)}$ How many grams of Ca(OH)_2 would be formed with 3.20 moles of CaC_2 ?

Student Solutions and Reflections

Solutions		
Mole-to-Mole Conversions (Write your solution to at least one box below.)	Molar Mass (Write your solution to at least one box below.)	Moles to Grams Conversions (Write your solution to at least one box below.)
1.	1. 2. 3.	
2.	1. 2. 3.	
3.	1. 2. 3.	
Reflections		
Which activity did you choose? Why?	Which activity did you choose? Why?	Which activity did you choose? Why?
What did you learn?	What did you learn?	What did you learn?
What are you still wondering?	What are you still wondering?	What are you still wondering?

Solutions

About this Choice Board

- Students must complete one box from each column. Each column provides opportunities to practice different skills in stoichiometry.
- Options are designed so that students will be able to practice skills in converting mole-to-mole and moles to grams and calculating molar mass. Students who have finished other work or those still needing support in any of these skills may be asked to complete more than one box.
- This activity is designed to be completed independently. Feedback should be given to students individually and solutions should not be shared digitally with students.

Mole-to-Mole Conversion	Molar Mass	Moles to Grams Conversions
1. = 9 mole O ₂ 6 mole KClO ₃ 3 mole O ₂ <hr style="width: 50%; margin-left: 0;"/> <div style="display: flex; justify-content: space-between; width: 50%; margin-left: 0;"> KClO₃ 2 mole </div>	1. NaBr = 102.9 g/mol 2. PbSO ₄ = 303.3 g/mol 3. Ca(OH) ₂ = 74.1 g/mol	182 g HCl
2. = 3 mole H ₂ 3 mole Zn 1 mole H ₂ <hr style="width: 50%; margin-left: 0;"/> <div style="display: flex; justify-content: space-between; width: 50%; margin-left: 0;"> Zn 1 mole Zn </div>	1. Na ₃ PO ₄ = 164.0 g/mol 2. (NH ₄) ₂ CO ₃ = 96.0 g/mol 3. C ₆ H ₁₂ O ₆ = 180.0 g/mol	0.686 moles Fe
3. = 12 mole O ₂ 4 mole C ₃ H ₈ 3 mole O ₂ <hr style="width: 50%; margin-left: 0;"/> <div style="display: flex; justify-content: space-between; width: 50%; margin-left: 0;"> C₃H₈ 1 mole C₃H₈ </div>	1. Fe ₃ (PO ₄) ₂ = 357.4 g/mol 2. (NH ₄) ₂ S = 68.1 g/mol 3. AgF = 126.9 g/mol	237 g Ca(OH) ₂

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