

## Chapter 10 &amp; 12 Jeopardy Game

	Value	Question	Answer
Chemical Equations	200	What symbol indicates “yield” or “react to produce”?	
	400	What symbol indicates that a substance is dissolved in water?	
	600	What is the formula for oxygen by itself in a chemical equation?	
	800	What does the symbol “Δ” placed above the arrow indicate?	
	1000	What is an unbalanced equation containing the correct formulas of all substances in a reaction called?	
Reaction Types	200	$2 \text{Li (s)} + \text{Br}_2 \text{(l)} \rightarrow 2 \text{LiBr (s)}$	
	400	$2 \text{KClO}_3 \text{(s)} \rightarrow 2 \text{KCl (s)} + 3 \text{O}_2 \text{(g)}$	
	600	$3 \text{F}_2 \text{(g)} + 2 \text{GaI}_3 \text{(aq)} \rightarrow 2 \text{GaF}_3 \text{(aq)} + 3 \text{I}_2 \text{(s)}$	
	800	$\text{C}_3\text{H}_8 \text{(g)} + 5 \text{O}_2 \text{(g)} \rightarrow 3 \text{CO}_2 \text{(g)} + 4 \text{H}_2\text{O (g)}$	
	1000	$2 \text{H}_3\text{PO}_4 \text{(aq)} \rightarrow \text{H}_4\text{P}_2\text{O}_7 \text{(aq)} + \text{H}_2\text{O (l)}$	
Balancing Reactions	200	Number that represents the number of moles of a substance in a balanced chemical equation.	
	400	Number you should never, never, EVER change when balancing a chemical equation.	
	600	Number needed to balance this equation: $\text{P}_4\text{O}_{10} + 6 \text{H}_2\text{O} \rightarrow \underline{\hspace{1cm}} \text{H}_3\text{PO}_4$	
	800	Balance this equation: $\underline{\hspace{1cm}} \text{Sb} + \underline{\hspace{1cm}} \text{O}_2 \rightarrow \underline{\hspace{1cm}} \text{Sb}_4\text{O}_6$	
	1000	Balance this equation: $\underline{\hspace{1cm}} \text{Al} + \underline{\hspace{1cm}} \text{HCl} \rightarrow \underline{\hspace{1cm}} \text{AlCl}_3 + \underline{\hspace{1cm}} \text{H}_2$	
Replacement Reactions	200	What common solvent is used for both single- and double-replacement reactions?	
	400	What are the formula and solubility of this ion pair: $\text{Fe}^{3+}$ and $\text{S}^{2-}$ ?	
	600	Name for the solid produced during a chemical reaction in a solution.	
	800	Products (formulas) of the reaction $\text{Na (s)} + \text{FeCl}_3 \text{(aq)} \rightarrow$	
	1000	Insoluble product (formula) of the reaction $\text{Ca(NO}_3)_2 \text{(aq)} + \text{K}_2\text{SO}_4 \text{(aq)} \rightarrow$	
Stoichiometry	200	Balanced equations obey the Law of Conservation of _____.	
	400	What is the mole ratio to calculate mass of $\text{Al}_2\text{O}_3$ produced from mass of Al in the reaction $4 \text{Al} + 3 \text{O}_2 \rightarrow 2 \text{Al}_2\text{O}_3$ ?	
	600	What is the reactant that is used up in a chemical reaction called?	
	800	What is the amount of product that can be produced in a chemical reaction called?	
	1000	How is the actual yield in a chemical reaction determined?	
Potpourri	200	What are the substances that go into a reaction called?	
	400	What is the ratio of the actual yield to the theoretical yield multiplied by 100 called?	
	600	In the reaction, $\text{Cu (s)} + 2\text{AgNO}_3 \text{(aq)} \rightarrow \text{Cu(NO}_3)_2 \text{(aq)} + 2\text{Ag (s)}$ , what is being reduced?	
	800	Sulfide ( $\text{S}^{2-}$ ) compounds are usually insoluble except when they contain $\text{NH}_4^+$ or what type of metal ion?	
	1000	Name both of the products of the reaction $\text{C}_2\text{H}_6 \text{(g)} + \text{O}_2 \text{(g)} \rightarrow$	

Final Jeopardy Category: Theoretical Yield

For the reaction,  $4 \text{P} + 5 \text{O}_2 \rightarrow 2 \text{P}_2\text{O}_5$ , what is the theoretical yield (in moles) of  $\text{P}_2\text{O}_5$  if 8 moles of P reacts with 16 moles of  $\text{O}_2$ ?