

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

Box: \_\_\_\_\_

# Chemical Equations and Balancing Review

1. What is a reactant?
2. What is a product?
3. What is a subscript in a chemical equation? Give an example and why it is used.
4. What is a coefficient in a chemical equation? Give an example and why it is used.
5. What is the law of conservation of mass? How does it play a role in the balancing of chemical equations?
6. What are the different states of matter and their abbreviations that can be written in parenthesis after the chemical formula in a chemical equation?
7. Balance the following equations:
  - a.  $\text{___ Al(NO}_3\text{)}_3 + \text{___ NaOH} \rightarrow \text{___ Al(OH)}_3 + \text{___ NaNO}_3$
  - b.  $\text{___ KNO}_3 \rightarrow \text{___ KNO}_2 + \text{___ O}_2$
  - c.  $\text{___ Fe} + \text{___ H}_2\text{SO}_4 \rightarrow \text{___ Fe}_2(\text{SO}_4)_3 + \text{___ H}_2$
  - d.  $\text{___ O}_2 + \text{___ CS}_2 \rightarrow \text{___ CO}_2 + \text{___ SO}_2$
  - e.  $\text{___ Cu} + \text{___ Cl}_2 \rightarrow \text{___ CuCl}$
  - f.  $\text{___ Mg} + \text{___ N}_2 \rightarrow \text{___ Mg}_3\text{N}_2$
  - g.  $\text{___ Na} + \text{___ H}_2\text{O} \rightarrow \text{___ NaOH} + \text{___ H}_2$
  - h.  $\text{___ Cu} + \text{___ S} \rightarrow \text{___ Cu}_2\text{S}$
  - i.  $\text{___ AgNO}_3 + \text{___ H}_2\text{SO}_4 \rightarrow \text{___ Ag}_2\text{SO}_4 + \text{___ HNO}_3$
  - j.  $\text{___ C}_2\text{H}_6 + \text{___ O}_2 \rightarrow \text{___ CO}_2 + \text{___ H}_2\text{O}$
8. Describe the five main types of reactions. Write out general examples of each.
9. Compare a growth mindset to a fixed mindset. How are they similar? How are they different? Which is more beneficial for academic success? Why?
10. List 5 things you should always do while completing a lab in chemistry. List 5 things you should never do in a lab.