

WKS
Balancing Equations

NAME _____
Period _____ **Date** _____

- 1) Why is it important that a chemical equation be balanced?

- 2) When balancing a chemical equation, can you adjust the number that is subscripted to a substance formula? Explain your answer.

- 3) Write skeleton equations for the following word equations, then balance them.
 - a. hydrogen(g) + bromine(g) → hydrogen bromide(g)

 - b. carbon monoxide(g) + oxygen(g) → carbon dioxide(g)

 - c. potassium chlorate(s) → potassium chloride(s) + oxygen(g)

 - d. In water, iron(III) chloride reacts with sodium hydroxide, producing solid iron(III) hydroxide and aqueous sodium chloride.

 - e. Solid zinc and aqueous sulfuric acid react to produce hydrogen gas and aqueous zinc sulfate.

- 4) **Using Numbers** Is the following equation balanced? If not, correct the coefficients.
$$2\text{K}_2\text{CrO}_4(\text{aq}) + \text{Pb}(\text{NO}_3)_2(\text{aq}) \rightarrow 2\text{KNO}_3(\text{aq}) + \text{PbCrO}_4(\text{s})$$

Balance the following equations:



