

1. Write a sentence that describes this chemical reaction:

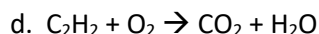
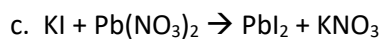
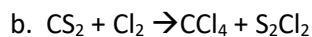
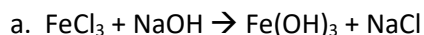


2. Sulfur burns in oxygen to form sulfur dioxide. Write a skeleton equation for this chemical reaction.

3. Balance the equation:  $\text{CO} + \text{Fe}_2\text{O}_3 \rightarrow \text{Fe} + \text{CO}_2$

4. Write the balanced chemical equation for the reaction of carbon with oxygen to form carbon monoxide.

5. Balance the equation.



6. Write and balance these equations.

a. calcium hydroxide + sulfuric acid  $\rightarrow$  calcium sulfate + water

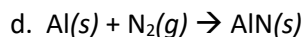
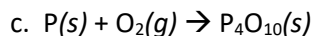
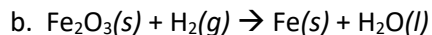
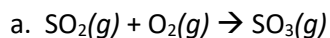
b. sodium + water  $\rightarrow$  sodium hydroxide + hydrogen

9. Write skeleton equations for these reactions.

a. Heating copper (II) sulfide in the presence of diatomic oxygen produces pure copper and sulfur dioxide gas.

b. When heated, baking soda (sodium hydrogen carbonate) decomposes to form the products sodium carbonate, carbon dioxide, and water.

10. Balance the following equations:



11. Write and balance equations for the following reactions:

a. iron metal and chlorine gas react to form solid iron (III) chloride.

b. Solid aluminum carbonate decomposes to form solid aluminum oxide and carbon dioxide gas.

c. Solid magnesium reacts with aqueous silver nitrate to form solid silver and aqueous magnesium nitrate.

