

Balancing Chemical Equations (3)

Name _____ Per. _____

1. _____ KNO_3 (aq) \rightarrow _____ KNO_2 (cr) + _____ O_2 (g)
2. _____ C_2H_6 (g) + _____ O_2 (g) \rightarrow _____ CO_2 (g) + _____ H_2O (g)
3. _____ Na (cr) + _____ H_2O (l) \rightarrow _____ NaOH (aq) + _____ H_2 (g)
4. _____ O_2 (g) + _____ CS_2 (cr) \rightarrow _____ CO_2 (g) + _____ SO_2 (aq)
5. _____ C_5H_{10} (g) + _____ O_2 (g) \rightarrow _____ CO_2 (g) + _____ H_2O (g)
6. _____ Cu (cr) + _____ H_2SO_4 (aq) \rightarrow _____ CuSO_4 (aq) + _____ SO_2 (g) + _____ H_2O (l)
7. _____ IrCl_3 + _____ NaOH (aq) \rightarrow _____ Ir_2O_3 + _____ HCl + _____ NaCl (cr)

Word Problems

Write the correct chemical formula and balanced equation for the following word problems. Do not forget diatomic molecules. Optional - show the correct state of matter for each compound.

8. Liquid water decomposes by an electric current to produce hydrogen and oxygen gases.
9. Sulfur trioxide gas (SO_3) reacts with liquid water to make one of the most important manufactured chemicals, aqueous sulfuric acid (H_2SO_4).
10. Nitrogen (II) oxide reacts with hydrogen gas to form ammonia gas (see pg. 259) and water vapor.