

Chemical Reactions: Word Equations

Read the following statements. For each reaction that is described, identify the *reactant(s)* and the *product(s)* and then write a word equation to represent the reaction that takes place. (*Hint: Remember that when burning takes place, oxygen is one of the reactants.*)

1. *Octane*, a component of gasoline, *burns* in an automobile engine; *carbon dioxide* and *water* are formed.

2. Acid rain is formed when *sulphur dioxide* (from burnt sulphur) reacts with *water* in the air to form *sulphurous acid*.

3. The heat and pressure inside an automobile engine cause *nitrogen* and *oxygen* to react; the resulting substance is a pollutant, *nitrogen monoxide*.

4. Rust on cars, usually *iron(III) oxide trihydrate*, is formed when *iron* is exposed to *oxygen* and *water* in the air.

5. *Hydrogen* gas is produced when an acid such as *hydrochloric acid* reacts with a metal such as *zinc*. The reaction also produces a salt – in this case, *zinc chloride*.

6. When *propane* is added to *oxygen*, a burning reaction takes place and the products are *carbon dioxide* and *water*.

7. *Silver sulphide* is produced when the two reactants, *silver* and *sulphur* are mixed together.

8. When *carbon dioxide* is added to *water*, the resulting chemical is *carbonic acid*.

9. *Copper (II) nitrate*, *nitrogen monoxide* and *water* are all produced when *copper* is added to *nitric acid*.

10. The addition of *sulphurous acid* and *sodium carbonate* together results in the production of *sodium sulphate*, *carbon dioxide* and *water*.