

Brainpop—Chemical Equations

Name:

Period:

Watch the Brainpop on the chemical equations, then answer the questions below.

- _____ 1. In the equation $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$, what are the reactants?
- hydrogen atoms
 - hydrogen and oxygen molecules
 - water molecules
- _____ 2. When different atoms bond together, new substances are made. Which statement best describes the new molecules (products)?
- the products usually weigh more than the original reactants
 - the products often have completely different properties than the reactants
 - the products usually have more atoms than the reactants
 - the products are usually more toxic than the reactants
- _____ 3. Sulfuric acid is made of two hydrogen atoms (H), one sulfur atom (S), and four oxygen atoms (O). What is its molecular formula?
- $2\text{H}_4\text{SO}$
 - $\text{H}_4\text{S}_2\text{O}$
 - H_2SO_4
 - $\text{H}_2\text{S}_2\text{O}_4$
- _____ 4. What is the problem with this unbalanced chemical equation?
- $$\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$$
- a hydrogen is missing from the reactants
 - an oxygen is missing from the product
 - an extra oxygen is in the product
 - an extra hydrogen is in the reactants
- _____ 5. Which reactant is missing from the following equation?
- $$? + \text{PO}_4 \rightarrow \text{H}_3\text{PO}_4$$
- one hydrogen atom (H)
 - one phosphorus atom (P)
 - one oxygen atom (O)
 - three hydrogen atoms (H_3)
 - four oxygen atoms (O_4)
- _____ 6. What is the product of the following equation?
- $$2\text{Na} + \text{S}_2\text{O}_3 \rightarrow ?$$
- NaS_2O_3
 - NaS_4O_3
 - $\text{Na}_2\text{S}_2\text{O}_5$
 - $\text{Na}_2\text{S}_2\text{O}_3$

Determine if the statement is true or false. If false, replace the word in **bold** with the correct word on the line. If true, write "true" on the line. Possible word choices are provided below:

atoms molecules properties

- _____ Atoms bond together into **PAIRS**.
- _____ When different atoms bond together, they make substances with new **SIZES**.
- _____ A chemical equation is balanced if it has equal numbers of **MOLECULES** on each side.

Look at this chemical equation: $\text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ Is it balanced, or not? Explain your answer.

I know that the chemical equation (is/is not) _____ balanced because...