Year 11 Science: Chemical equations, ion formulae and conservation of mass

Name: _____ Date: _____

Try these without your notes first, then check the answer key.

Practice

1. Write the formulae of potassium carbonate, iron(III) hydroxide and zinc nitrate.

2. Count the atoms of each element in $3Ca(NO_3)_2$.

3. Balance $Fe + O_2 \rightarrow Fe_2O_3$, the equation for iron rusting.

4. Hydrogen peroxide breaks down into water and oxygen. Balance $H_2O_2 \rightarrow H_2O + O_2$.

5. 5.0 g of baking soda is added to 50.0 g of vinegar in an open cup. When the fizzing stops the cup's contents weigh 52.4 g. What mass of carbon dioxide escaped?

6. Steel wool is heated in air and its mass goes up. Explain why, using conservation of mass.

Fix the mistake

7. Correct this statement: "To balance $H_2 + O_2 \rightarrow H_2O$, change the water to H_2O_2."

8. Correct this statement: "Magnesium hydroxide is $MgOH_2$."

9. Correct this statement: "The mass went down in the open flask, so mass was not conserved."

10. Correct this statement: "Aluminium oxide is AlO because aluminium and oxygen combine."