

Things to Know for Quiz 6

Chem 30A, Fall 2019

Chapter 7

1. Given a chemical reaction, balance the equation. (Put coefficients in front of the formulas. Do not change any formulas. The number of atoms of each element on both sides of the equation must match.) [Ch.7 #47-56, 85-86]
2. Given a description of a chemical reaction in words, write the formulas and the equation, and then balance the equation. (In order to do this, you will need to remember which elements are diatomic, and you will need to be able to write the formulas of different types of compounds from their names. This is covered in Chapter 5.) [Ch. 7 #35-46]
3. Given the solubility rules for ionic compounds, be able to determine whether various ionic compounds are soluble or insoluble in water. [Ch. 7 #57-62]
4. Given the formulas or names of two ionic compounds, be able to determine the equation for the precipitation reaction. (First, what ions are present? Write them down, including charge. Second, switch the ions and write the new formulas. Third, check the solubility rules to determine which ones are soluble or insoluble. Fourth, write and balance the equation.) [Ch. 7 #63-68]
5. Given a “molecular” equation for a precipitation reaction, write the complete/total ionic equation and the net ionic equation. (Soluble ionic substances are written as separate ions. For the net ionic equation, cancel out the spectator ions.) [Ch. 7 #71-72, 75-76]
6. Combine skills #4 and 5. [Ch. 7 #93-96]
7. Given the formulas of an acid and a base, predict the products and write the balanced equation for the reaction. (The ions switch, and one of the products is H_2O .) [Ch. 7 #77-80]
8. Be able to write the balanced equation for any of the gas-forming reactions (ions switch). [Ch. 7 #81-82]
9. Recognize some types of oxidation-reduction reactions. If an (uncharged) element appears by itself somewhere in the reaction, it's a redox reaction. [Ch. 7 #83-84]
10. You still need to know the names and charges of the ions, including polyatomic ions.

Additional items:

- Estimate values from a graph accurately. Include the correct number of decimal places. Refer to the estimation handouts, the graphing assignment and answers, and the graph estimation problems on Exam 1.
- Determine the slope of a graph accurately. (Choose 2 points on the line far apart from each other, estimate the x and y values, and then find the slope, including units.)