Balancing Equations Hints and Tips

1. Use a pencil, you’ll be doing lots of erasing and changing!
2. Remember, you can only add more elements, no subtracting! Add coefficients only in front of formulas. Do not change subscripts!
3. Keep a written count of your elements on both the reactants and the products side of the equation.
4. Use trial and error. Sometimes you’ll have to change things more than once, but this is often the fastest method for simple equations.
5. Balance elements in compounds first and single elements last. It’s easy to change up the single elements.
6. Finish counting all atoms in one compound after you have placed a coefficient in front. Don’t think you’ll remember it later.
7. Hydrogen and oxygen are very common atoms and will often be balanced by the time you balance the other elements. Balance hydrogen second last and oxygen last.
8. If a polyatomic ion is on both sides of an equation you can keep it as one unit. This can help keep things organized.
9. Perform a final check once you are finished to be sure that all elements are balanced.

\_\_\_Fe + \_\_\_Br2 \_\_\_FeBr3

\_\_\_Sn(NO2)4 + \_\_\_K3PO4 \_\_\_KNO2 + \_\_\_Sn3(PO4)4

\_\_\_C2H6  + \_\_\_O2 \_\_\_CO2 + \_\_\_H2O