Hints for Balancing Equations!

1.) Balance METALS first.

_____ $CoBr_3$ + _____ $CaSO_4$ → _____ $CaBr_2$ + _____ $Co_2(SO_4)_3$

2.) Balance elements that occur in more than 2 places LAST!

_____ SnS_2 + _____ O_2 → _____ Sn_2O_3 + _____ SO_2

3.) Balance elements in order of simplest possibility to next simplest possibility and so on.

_____ $FeCl_2$ + _____ Li_3PO_4 → _____ $Fe_3(PO_4)_2$ + _____ $LiCl$

4.) Look for related coefficients and balance two or more things at one time.

_____ H_2SO_4 + _____ C → _____ SO_2 + _____ H_2O + _____ CO_2

5.) Balance isolated elements (singletons) last.

Ex.) C above in rule 4 (you will never mess anything else up!)

6.) If you run into an odd/even problem you can use fractions temporarily, and then multiply by the denominator to eliminate the fraction.

_____ C_6H_{14} + _____ O_2 → _____ CO_2 + _____ H_2O

7.) If there are polyatomic ions, do NOT break into elements and balance, balance the polyatomic ion like it is a single element.

_____ Al + _____ $Pb(NO_3)_2$ → _____ $Al(NO_3)_3$ + _____ Pb