

mole

mol

6.02×10^{23} atoms
particles
molecules
compounds

Mg 24 g/mol

Ni 59 g/mol

NaCl Na $23 \times 1 = 23$

Cl $35.5 \times 1 = 35.5$

58.5 g/mol

1. $84.5\text{g} \rightarrow \text{mol}$

$$\frac{84.5 \cancel{\text{g}} \times \boxed{\frac{1 \text{ mol}}{111 \cancel{\text{g}}}}}{1} = .76126 \text{ mol}$$

$$\text{Ca } 40 \times 1 = 40$$

$$.761 \text{ mol}$$

$$\text{Cl } 35.5 \times 2 = 71$$

$$\boxed{111 \text{ g} = 1 \text{ mol}}$$

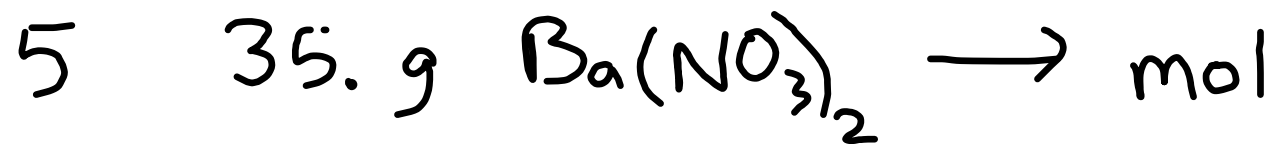
2. $2.3 \times 10^6 \text{ g NaCl} \rightarrow \text{mol}$

$58.5 \text{ g} = 1 \text{ mol (NaCl)}$

$$\frac{2.3 \times 10^6 \text{ g} \times 1 \text{ mol}}{58.5 \text{ g}} = 39316.23 \text{ mol}$$

39316
39000 mol

$3.9 \times 10^4 \text{ mol}$



Ba $137 \times 1 = 137$



N $14 \times 2 = 28$

O $16 \times 6 = 96$

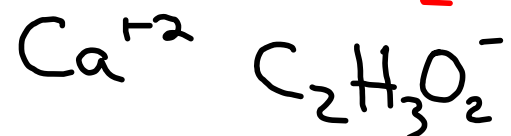
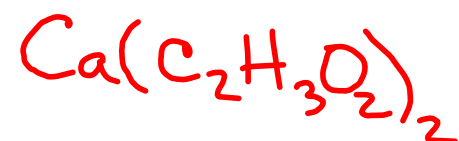
261 g = 1 mol

$$\frac{35. \text{g} \times 1 \text{mol}}{261 \text{g}} = .134099 \text{mol}$$

.13 mol

$1.3 \times 10^{-1} \text{mol}$

7. 4400 moles $\rightarrow$ g



$$\text{Ca} \quad 40 \times 1 = 40$$

$$\text{C} \quad 12 \times 4 = 48$$

$$\text{H} \quad 1 \times 6 = 6$$

$$\text{O} \quad 16 \times 4 = \underline{64}$$

$$158 \text{ g} = 1 \text{ mol}$$

$$\frac{4400 \text{ mol} \times 158 \text{ g}}{1 \text{ mol}} = 6.9 \times 10^5 \text{ g}$$

$$690000 \text{ g}$$

$$6. \quad 350\text{g} \rightarrow \text{mol}$$



$$\text{Sr } 88 \times 3 = 264$$

$$\text{P } 31 \times 2 = 62$$

$$\text{O } 16 \times 8 = \frac{128}{454\text{g} = 1\text{mol}}$$

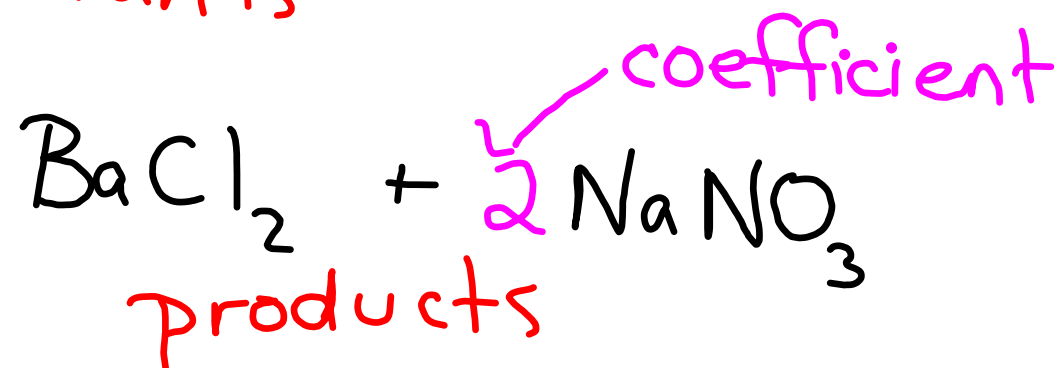
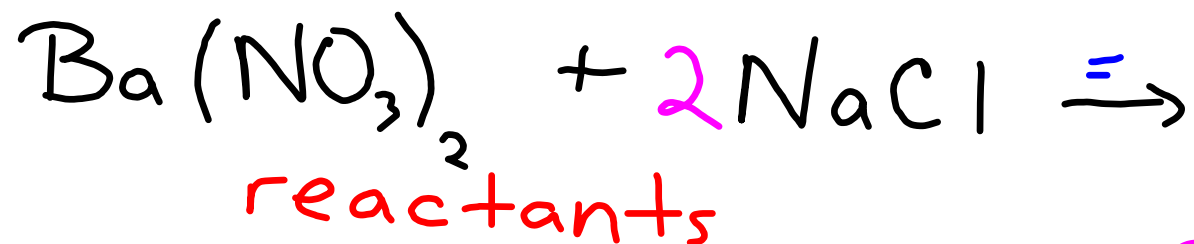
$$\frac{350\text{g} \times 1\text{mol}}{454\text{g}} = .77092511\text{mol}$$

7709.2511
7700

.77mol

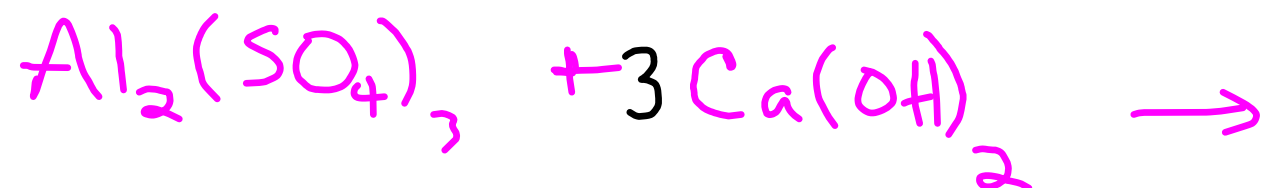
8.

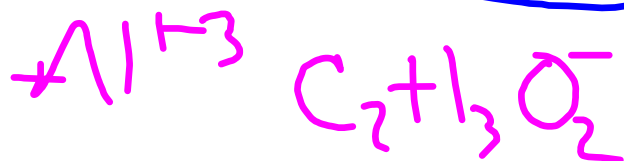
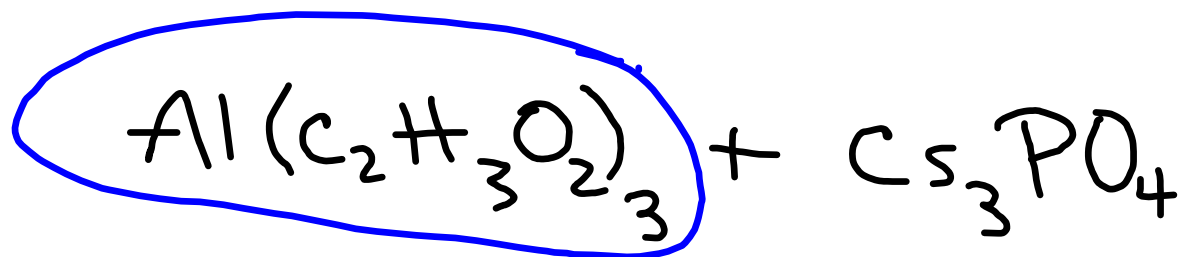
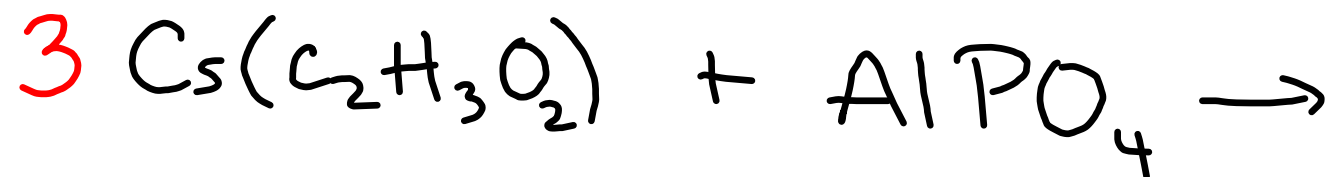
Polyatomic ion

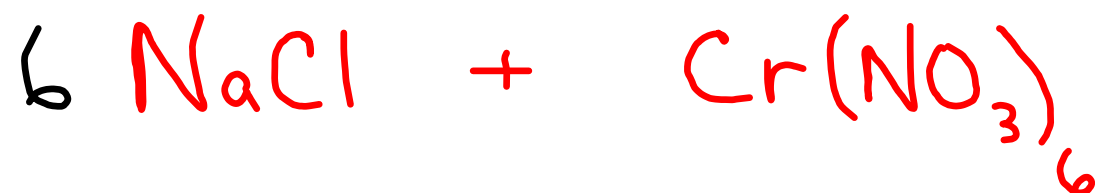
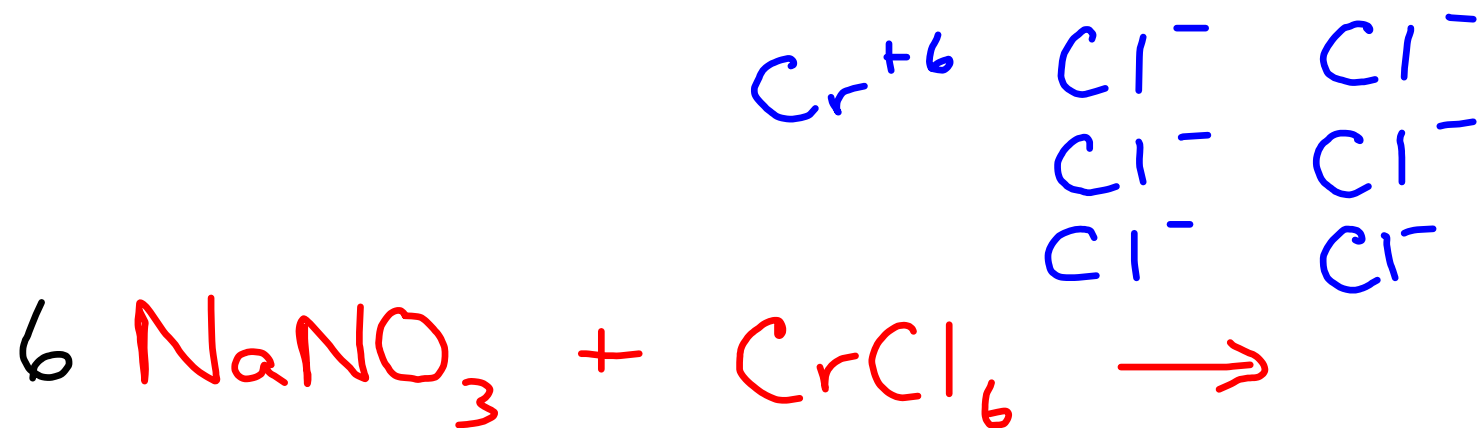


2 = coefficient = # of moles of a compd.

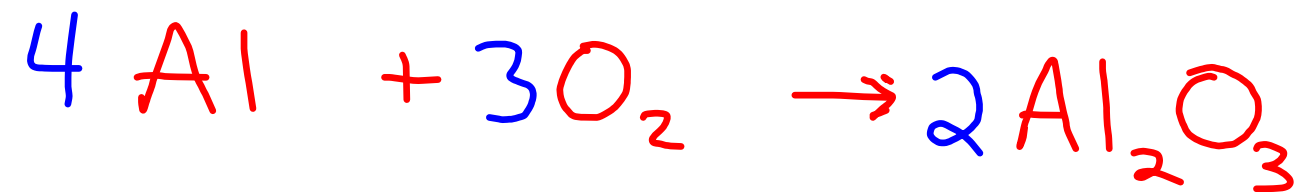
11.

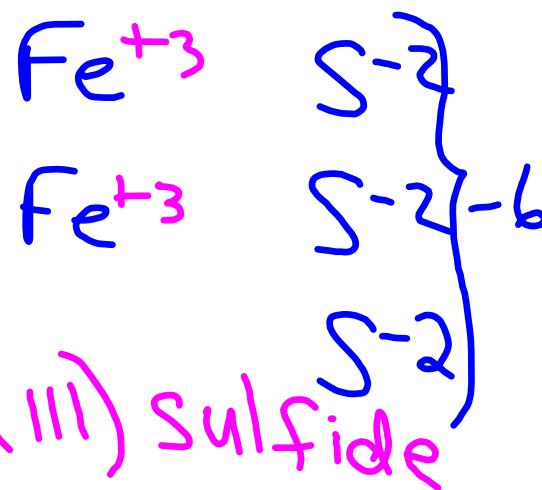
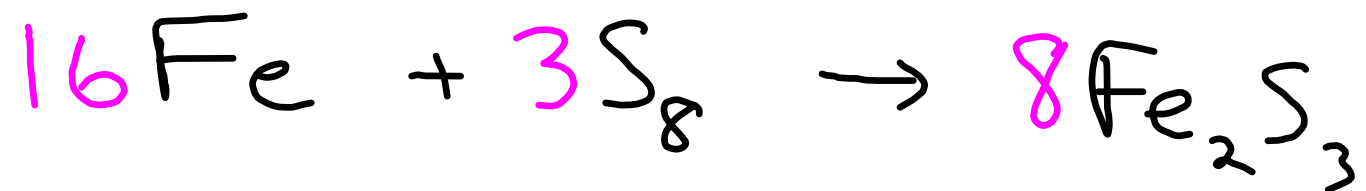




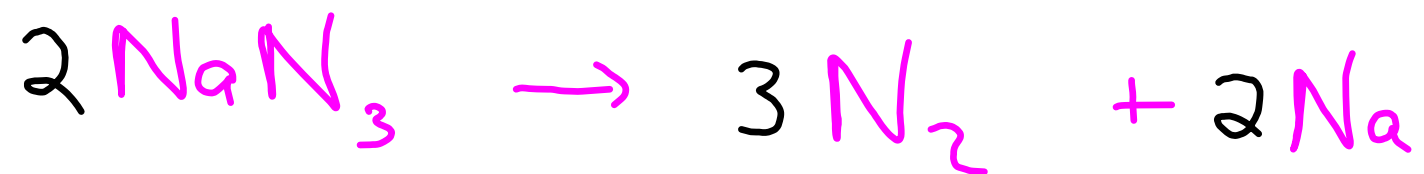


odd-even





13



Balancing hydrocarbons

hydrocarbon = has Hs and Cs

① Balance the Cs

② Balance the Hs

③ Balance the Os

If the Os do not balance
put a 2 in front of the
hydrocarbon and start at
1

9.

