

- 1) Determine the number of atoms in 2.7 mol of sucrose $C_{12}H_{22}O_{11}$:

C _____

O _____

H _____

Total # atoms _____

- 2) Calculate the molar mass of the following compounds and determine the mass % of each element:

a) Na_2CO_3 : $M =$ _____ g/mol

% Na = _____ %

% C = _____ %

% O = _____ %

 $\Rightarrow$ double check!

Total % = % Na + % C + % O = 100% ?

b) NH_4NO_3 $M =$ _____ g/mol

% N = _____ %

% H = _____ %

% O = _____ %

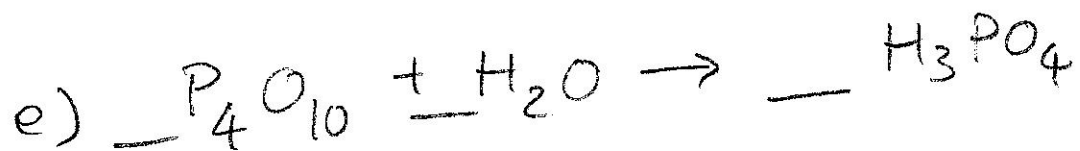
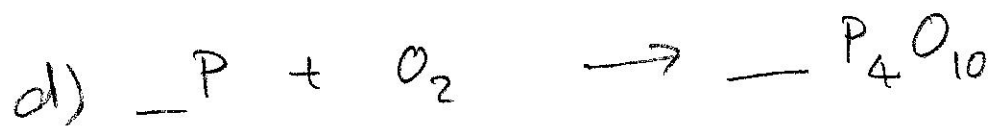
 $\Rightarrow$ double check!

Total % = % N + % H + % O = 100% ?

- 3) Determine the empirical formula for the following compounds based on their elemental analysis:

a) $Na_xCr_yO_z$: % Na = 17.55%; % Cr = 39.70%; % O = 42.75%Na Cr Ob) $K_aH_bP_cO_d$: % K = 28.73%; % H = 1.48%; % P = 22.76%
% O = 47.03%K H P O

4) Balance the following equations:



 / 10 Points