

Self-Test on Tutorial 5-1

Do all of these questions showing full work and check the answers on Tutorial 5-1 HELP. Show the teacher your work.

1. Determine the percent composition of the compound calcium nitrate ($\text{Ca}(\text{NO}_3)_2$)
(That is, find the % calcium, the % nitrogen and the % oxygen in this compound.)
2. Find the mass of carbon contained in 336.16 grams of CO_2 .
3. Find the mass of oxygen contained in 860.0 grams of magnesium nitrate ($\text{Mg}(\text{NO}_3)_2$)
4. A compound used in photography is called potassium persulphate. A 0.8162 gram sample of the compound was analyzed and found to contain 0.2361 grams of potassium, 0.1936 grams of sulphur and the rest was oxygen.
 - a) Find the mass of oxygen in the sample.
 - b) Determine the empirical formula for this compound. (Use a table like the one on page 10)
 - c) The molar mass of this compound is 270.4 g/mol. Determine the molecular formula. (Use a table like the one on the top of this page.)