

## Mole Problems

- 1) Calculate the molar mass of each of the following substances: a)  $\text{K}_2\text{SO}_4$  b)  $\text{Ca}_3(\text{PO}_4)_2$  c)  $\text{C}_6\text{H}_8\text{O}_6$
- 2) Calculate the molar mass of a compound if 0.372 moles of it have a mass of 152 g.
- 3) Convert 13 g of caffeine ( $\text{C}_8\text{H}_{10}\text{N}_4\text{O}_2$ ) to moles
- 4) What is the mass, in grams, of a single atom of mercury (Hg)?
- 5) How many atoms of cobalt are present in 5.25 mol of Co?
- 6) How many grams of gold are there in 15.3 mol of gold?
- 7) How many molecules of ethane ( $\text{C}_2\text{H}_6$ ) are present in 0.334 g of ethane
- 8) Calculate the number of C, H, and O atoms in 1.50 g of glucose,  $\text{C}_6\text{H}_{12}\text{O}_6$
- 9) The density of water is 1.00 g/mL. How many molecules of water are present in 2.56 mL of water?
- 10) Which one has more atoms, 1.10 g of hydrogen or 14.1 grams of chromium?