**Moles**

1. What is the molar mass of the following (take all molar masses to the hundredths place):
   a. P
   b. Cl₂
   c. H₂O
   d. BF₃
   e. K₂SO₄
   f. SO₃
   g. Pb(NO₃)₂
   h. Fe₂(CO₃)₃

2. Using the molar masses from #1, perform the following conversions:
   a. 14.50g of P represents how many moles of P?
   b. 1.75 moles of Cl₂ is how many grams?
   c. 10.5 moles of water, H₂O, would weight how many grams?
   d. 25.00g of BF₃ represents how many moles?
   e. 3.75g of K₂SO₄ are produced in an experiment. How many moles is this?
   f. 0.43 moles of SO₃ would weigh how many grams?
   g. 0.27 moles of Pb(NO₃)₂ represents how many grams?
   h. If 45.64g of Fe₂(CO₃)₃ are produced in a ppt. (precipitate) reaction, what number of moles is this?
Answers

1. Molar Mass
   a. 30.97 g/mol
   b. 70.90 g/mol
   c. 18.02 g/mol
   d. 67.81 g/mol
   e. 174.27 g/mol
   f. 80.07 g/mol
   g. 331.2 g/mol
   h. 291.73 g/mol

2. Gram/mole conversions
   a. 0.4682 mol
   b. 124 g
   c. 189 g
   d. 0.3687 mol
   e. 0.0215 mol
   f. 34 g
   g. 89 g
   h. 0.1564 mol