Chemistry 115 - Name

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Quiz 5A (20 points) October 7, 2008

All work must be shown to receive credit.

Avogadro’s number = 6.022 x 1023/mol

1. (4 points) How many grams of Fe2S3 will contain 9.44 x 1023 atoms of iron (Fe)?
2. (2 points) What are two indicators of a chemical reaction (ie they are evidence that a chemical reaction has taken place.)
3. (6 points) Balance the following chemical reactions by inspection.
   1. Al + MnO2 🡪 Mn + Al2O3
   2. K3PO4 + BaCl2 🡪 KCl + Ba3(PO4)2
4. (8 points) Answerthe following questions using the balanced reaction shown below:

4 FeS2 + 11 O2 🡪 2 Fe2O3 + 8 SO2

* 1. How many molecules of O2 are required to react with 24 formula units of FeS2
  2. How many moles of SO2 will be formed by the complete reaction of 121 moles of O2?