Chemistry 115 Name

Dr. Cary Willard

Quiz 6A October 13, 2009

NA = 6.022 x 1023/mol

1. (4 points) Determine number of atoms of carbon in 6.21 grams of oxalic acid, H2C2O4.
2. (4 points) Predict the products for the following reaction and balance it showing correct state labels. Remember that phosphates (PO4-3) are generally insoluble and nitrates are generally soluble.

Na3PO4(aq) + Ca(NO3)2(aq) 🡪

1. (12 points) Bornite (Cu3FS3, molar mass =348.05 amu) is a copper ore used in the production of copper. When heated, the following reaction occurs:

2 Cu3FeS3(s) + 7 O2(g) 🡪 6 Cu(s) + 2 FeO(s) + 6 SO2(g)

* 1. How many moles of oxygen gas are required to react with 6.54 moles of bornite?
	2. If 37.2 grams of bornite are heated in the presence of excess oxygen, how many grams of copper will be generated?
	3. If 18.5 grams of copper are isolated after the reaction in part b, what is the percent yield for the reaction?

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Quiz 6B October 13, 2009

NA = 6.022 x 1023/mol

1. (4 points) Determine number of atoms of carbon in 3.54 grams of oxalic acid, H2C2O4.
2. (4 points) Predict the products for the following reaction and balance it showing correct state labels. Remember that phosphates (PO4-3) are generally insoluble and nitrates are generally soluble.

Li3PO4(aq) + Mg(NO3)2(aq) 🡪

1. (12 points) Bornite (Cu3FS3, molar mass =348.05 amu) is a copper ore used in the production of copper. When heated, the following reaction occurs:

2 Cu3FeS3(s) + 7 O2(g) 🡪 6 Cu(s) + 2 FeO(s) + 6 SO2(g)

* 1. How many moles of oxygen gas are required to react with 6.23 moles of bornite?
	2. If 31.4 grams of bornite are heated in the presence of excess oxygen, how many grams of copper will be generated?
	3. If 16.18 grams of copper are isolated after the reaction in part b, what is the percent yield for the reaction?

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Quiz 6C October 14, 2009

NA = 6.022 x 1023/mol

1. (4 points) Determine number of atoms of carbon in 4.08 grams of oxalic acid, H2C2O4.
2. (4 points) Predict the products for the following reaction and balance it showing correct state labels. Remember that oxalates (C2O4-2) are generally insoluble and nitrates are generally soluble.

Na2C2O4(aq) + Fe(NO3)3(aq) 🡪

1. (12 points) Bornite(Cu3FS3, molar mass =348.05 amu) is a copper ore used in the production of copper. When heated, the following reaction occurs:

2 Cu3FeS3(s) + 7 O2(g) 🡪 6 Cu(s) + 2 FeO(s) + 6 SO2(g)

* 1. How many moles of oxygen gas are required to react with 5.08 moles of bornite?
	2. If 28.6 grams of bornite are heated in the presence of excess oxygen, how many grams of copper will be generated?
	3. If 14.9 grams of copper are isolated after the reaction in part b, what is the percent yield for the reaction?

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Quiz 6D October 14, 2009

NA = 6.022 x 1023/mol

1. (4 points) Determine number of atoms of carbon in 5.73 grams of oxalic acid, H2C2O4.
2. (4 points) Predict the products for the following reaction and balance it showing correct state labels. Remember that oxalates (C2O4-2) are generally insoluble and nitrates are generally soluble.

K2C2O4(aq) + Cr(NO3)3(aq) 🡪

1. (12 points) Bornite(Cu3FS3, molar mass =348.05 amu) is a copper ore used in the production of copper. When heated, the following reaction occurs:

2 Cu3FeS3(s) + 7 O2(g) 🡪 6 Cu(s) + 2 FeO(s) + 6 SO2(g)

* 1. How many moles of oxygen gas are required to react with 5.81 moles of bornite?
	2. If 41.8 grams of bornite are heated in the presence of excess oxygen, how many grams of copper will be generated?
	3. If 21.2 grams of copper are isolated after the reaction in part b, what is the percent yield for the reaction?

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Quiz 6E October 15, 2009

NA = 6.022 x 1023/mol

1. (4 points) Determine number of atoms of carbon in 6.49 grams of oxalic acid, H2C2O4.
2. (4 points) Predict the products for the following reaction and balance it showing correct state labels. Remember that chromates (CrO4-2) are generally insoluble and nitrates are generally soluble.

Li2CrO4(aq) + Co(NO3)3(aq) 🡪

1. (12 points) Bornite(Cu3FS3, molar mass =348.05 amu) is a copper ore used in the production of copper. When heated, the following reaction occurs:

2 Cu3FeS3(s) + 7 O2(g) 🡪 6 Cu(s) + 2 FeO(s) + 6 SO2(g)

* 1. How many moles of oxygen gas are required to react with 7.03 moles of bornite?
	2. If 46.4 grams of bornite are heated in the presence of excess oxygen, how many grams of copper will be generated?
	3. If 23.8 grams of copper are isolated after the reaction in part b, what is the percent yield for the reaction?

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Quiz 6F October 15, 2009

NA = 6.022 x 1023/mol

1. (4 points) Determine number of atoms of carbon in 4.63 grams of oxalic acid, H2C2O4.
2. (4 points) Predict the products for the following reaction and balance it showing correct state labels. Remember that chromates (CrO4-2) are generally insoluble and nitrates are generally soluble.

K2CrO4(aq) + Ni(NO3)3(aq) 🡪

1. (12 points) Bornite(Cu3FS3, molar mass =348.05 amu) is a copper ore used in the production of copper. When heated, the following reaction occurs:

2 Cu3FeS3(s) + 7 O2(g) 🡪 6 Cu(s) + 2 FeO(s) + 6 SO2(g)

* 1. How many moles of oxygen gas are required to react with 7.57 moles of bornite?
	2. If 35.7 grams of bornite are heated in the presence of excess oxygen, how many grams of copper will be generated?
	3. If 18.2 grams of copper are isolated after the reaction in part b, what is the percent yield for the reaction?