

Name: _____

CM2200, Fall 2009
Homework #1

1. Give the chemical formula for each of the following minerals. Give one use for each mineral. (5 points each)

Chalcopyrite

Pyrite

Ilmenite

Rutile

Quartz

Magnetite

Hematite

Siderite

Goethite

Apatite

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2. A plant is separating copper from ore. If the ore going into the plant is 2% copper, and the plant processes 1000 tons of ore per hour, how many tons of copper is going into the plant per hour?

3. The copper processing plant in question 2 produces two products: a high-copper concentrate (25% copper) and a low-copper tailing. If the plant produces 75 tons per hour of high-copper concentrate:

(a) How many tons of low-copper tailings are produced?

(b) How many tons of copper are lost in the low-copper tailings?