S'more (S_2MmOr_3) Stoichiometry

Pre-lab problems, show your answers to Ms Loeblein and then you will get your materials:

Substance	Symbol	Unit Mass	Package
Graham Cracker	S	6.86 g	454 g
Marshmallow	Mm	7.86 g	283 g
Chocolate Pieces	Or	3.58 g	43.0 g
S'more	S_2MmOr_3	? g	

1. If you are given one bag of large marshmallows, what is the maximum number of S'mores that can be made?
2. How many boxes of graham crackers and how many chocolate bars are needed to make this many S'mores?
3. Calculate the molecular mass of the S'more (S_2MmOr_3).
4. Write a chemical equation using the symbols given in the table.

Post lab questions:

If copper metal pieces were added to an aqueous solution of silver nitrate, the Silver would be replaced in a single replacement reaction forming aqueous copper (II) nitrate and solid silver.

1. How much silver is produced is 15.00 grams of Cu is added to the solution of excess silver nitrate?
2. If silver metal sells for $4.50/ounce, how much would the Silver collect be worth? (1 gram = 0.0353 oz)

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Lesson plans:
I used this during a Bonding unit for the first time in 2009 because there are so few fun labs.

I planned for a class of 30 to each have 2 S'Mores (2 crackers squares, ¼ of a candy bar and 1 mellow). Some people prefer more chocolate, but I like just one slice because it is more likely to melt. I bought an extra package of each ingredient since I had never used this lab.
Need to purchase:
2 bags large mellows (each package has 36 marshmallows)
3 boxes crackers (1 box should yield 33 pairs of crackers),
15 candy bars.

I found some generic crackers that came in a 1 pound box with 2 bags of 33 squares. This seemed like a good package because I wouldn't have to worry about breaking crackers when I broke them in half.
Answers to Prelab:

1. If you are given one bag of large marshmallows, what is the maximum number of S'mores that can be made?

   36

2. How many boxes of graham crackers and how many chocolate bars are needed to make this many S'mores?

   2 boxes crackers, 9 candy bars

3. Calculate the molecular mass of the S'more (S_2MmOr). (6.86*2)+ 7.86+(3*3.58) =

   32.32g

4. Write a chemical equation using the symbols given in the table.

   $2S + Mm + 3Or \rightarrow S_2MmOr_3$

Post lab:

1. How much silver is produced when 15.00 grams of Cu is added to the solution of excess silver nitrate.

   $$Cu_{(s)} + 2AgNO_{3(aq)} \rightarrow 2Ag_{(s)} + Cu(NO_3)_{2(aq)}$$
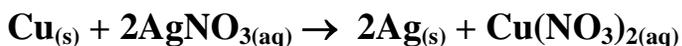
   $$\frac{15}{63.5} = \frac{x}{2*107.9}$$

   x=50.98 g

2. If silver metal sells for $4.50/ounce, how much would the Silver collect be worth? (1 gram = 0.0353 oz)

   50.98*.0353*4.5 = $8.10