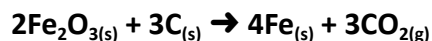


Chemistry 20: Stoichiometry**1. Numerical response question**

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Left justify your answer in the boxes provided

Iron ore, ($\text{Fe}_2\text{O}_{3(s)}$) is smelted into iron metal by reacting it with coke ($\text{C}_{(s)}$).... a type of coal, not a brand of pop)



What mass of coke is required to produce 500 kg of iron metal?

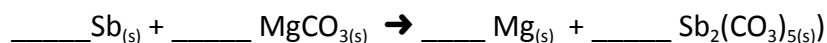
Express the answer as $a.bc \times 10^d$ grams. Fill in the values of a,b,c,d in the correct order using the boxes provided.

2. Numerical response question

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Left justify your answer in the boxes provided

Balance the following reaction and determine the mass of magnesium carbonate ($\text{MgCO}_{3(s)}$) needed to produce 100 g of antimony (V) carbonate ($\text{Sb}_2(\text{CO}_3)_{5(s)}$). Express the answer as _____ g

**3. Numerical response question**

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Left justify your answer in the boxes provided

Aluminium oxide ($\text{Al}_2\text{O}_{3(s)}$) is formed from its elements. If 1.4 L of oxygen at STP is consumed, the mass of aluminium oxide formed will be _____ g.

4. Numerical response question

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Left justify your answer in the boxes provided

A 10 g sample of aluminum foil is placed into 0.075 L of a 0.50 mol/L solution of copper (II) sulfate. The limiting reagent for this reaction is _____.

Enter 1 if it is the aluminium foil

Enter 2 if it is the copper (II) sulfate solution.

Solutions:

1. 8064
2. 77.6
3. 4.2
4. 2