

Stoichiometry - Moles Problems

1. In the reaction: $\text{Fe} + \text{S} \rightarrow \text{FeS}$, what mass of iron is needed to react completely with 32.0 g of sulphur? (ANS. 55.7g)
2. How much sulphurous acid can be produced when 128 g of sulphur dioxide combines with water in the following reaction, $\text{SO}_2 + \text{H}_2\text{O} \rightarrow \text{H}_2\text{SO}_3$? (ANS. 164g)
3. When aluminum is heated in oxygen, aluminum oxide is formed. What mass of the oxide can be obtained from 25.0 g of the metal? (ANS. 47.2g)
4. How much ammonium hydroxide is needed to react completely with 75.0 g of copper (II) nitrate in a double displacement reaction? (Ans. 28.0g)
5. How much aluminum metal is needed to replace all of the iron from 27.8 g of iron (III) oxide? (Ans. 9.39g)