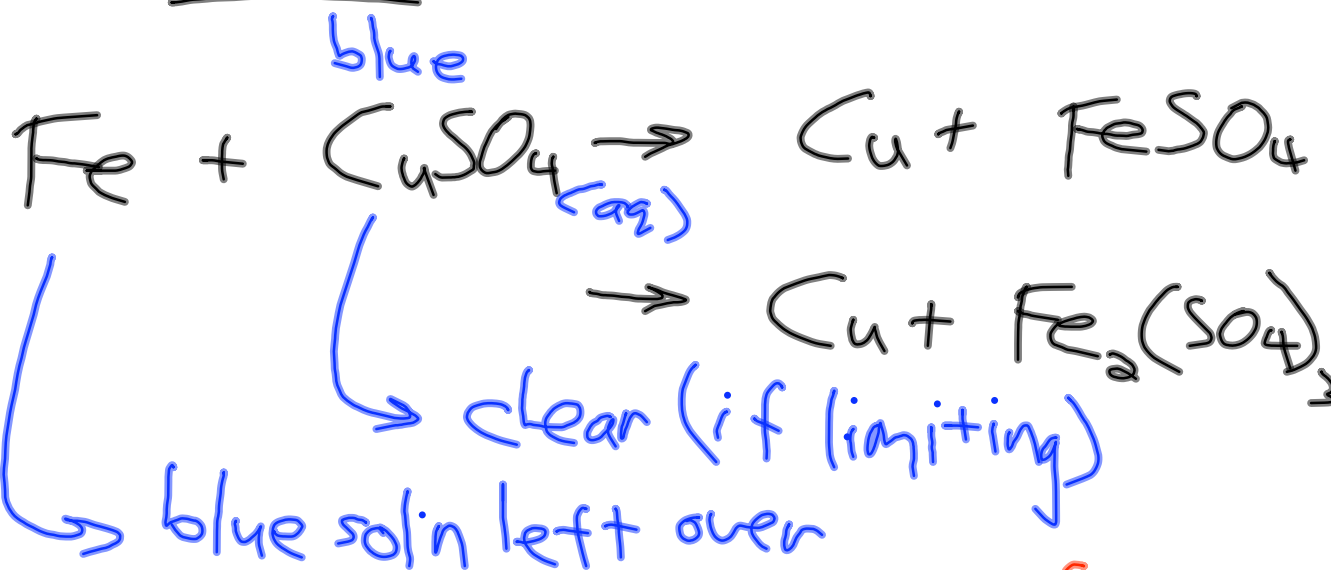


Limiting Reagents

- reactant that is used up first in the limiting reagent
- limits the reaction



- at the end of the reaction, if the sol'n is still blue. CuSO₄ is excess

$$\text{Fe} + \text{CuSO}_4 \rightarrow \text{Cu} + \text{FeSO}_4$$

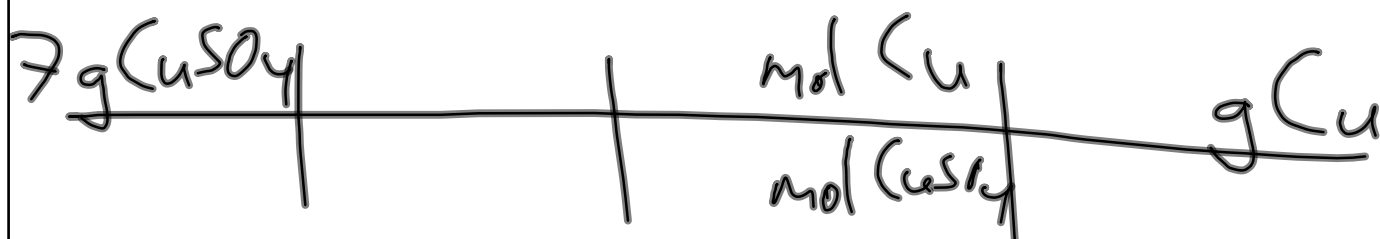
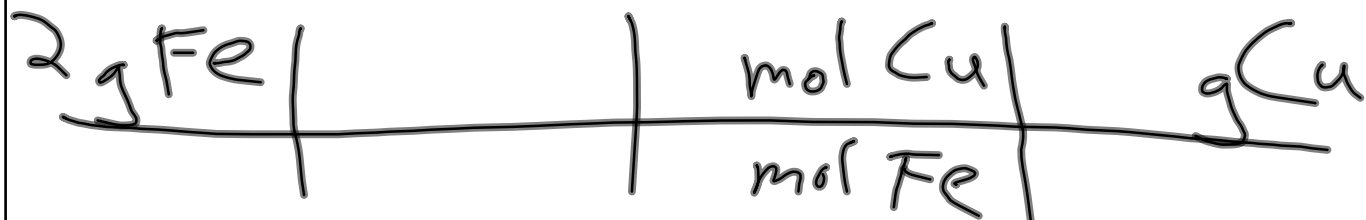
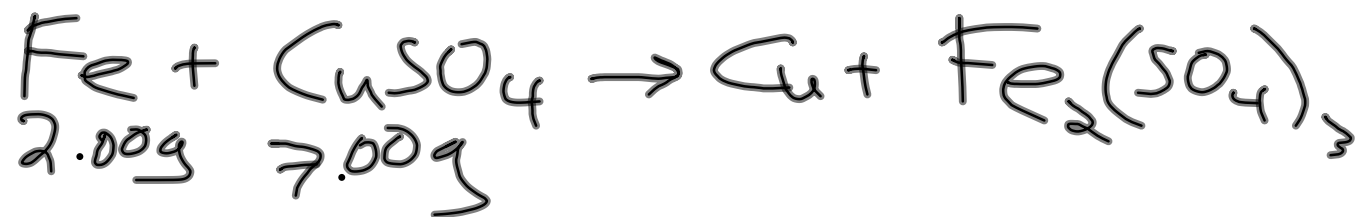
$$\begin{array}{c} 2.00\text{g} \\ \text{Fe} \end{array} + \begin{array}{c} 7.00\text{g} \\ \text{CuSO}_4 \end{array} \rightarrow \text{Cu} + \text{FeSO}_4$$

2.00g Fe	1mol Fe	1mol Cu	g Cu
	g Fe	1mol Fe	1mol Cu

pick smallest

7.00g CuSO ₄	1mol CuSO ₄	mol Cu	g Cu
	g CuSO ₄	mol CuSO ₄	1mol Cu

$$\text{Fe} + \text{CuSO}_4 \rightarrow \text{Cu} + \text{Fe}_2(\text{SO}_4)_3$$



Whichever reaction has the correct limiting reagent (based on your observations) is the correct reaction.