Properties of Acids and Bases

1) Determine the Bronsted-Lowry acid/base pairs in the following equations, and identify which one in each pair is the acid and which is the base:

- \( \text{H}_2\text{SO}_4 + \text{NaOH} \rightarrow 2 \text{H}_2\text{O} + \text{NaSO}_4 \)

- \( \text{HPO}_4^{2-} + \text{HBr} \rightarrow \text{H}_2\text{PO}_4^{-1} + \text{Br}^- \)

- \( \text{Ca(OH)}_2 + 2 \text{HNO}_3 \rightarrow 2 \text{H}_2\text{O} + \text{Ca(NO}_3)_2 \)

- \( \text{H}_2\text{O} + \text{NH}_3 \rightarrow \text{NH}_4^+ + \text{OH}^- \)

- \( \text{H}_2\text{O} + \text{HI} \rightarrow \text{H}_3\text{O}^+ + \text{I}^- \)

2) What is the difference between the Bronsted-Lowry and Arrhenius definition of a base?