Acids and Bases

1. Which of the following are weak bases?

KOH <u>strong</u>	NH₃ <u>weak_</u>	CH3NH2 <u>weak</u>
Sr(OH)₂ <u>strong</u>	NaOH <u>strong</u>	NH₄⁺ <u>weak acid</u>

2. Label the following as strong or weak acids.

HClO <u>W</u>	HI <u>s</u>	HNO ₂
H3PO4 <u>w</u>	HF _ <u>w</u>	CH₃COOH <u>w</u>
HClO4 <u>s</u>	H ₂ SO ₃ <u>w</u>	H ₂ SO ₄ _s

3. Write the net ionic equation for the reaction of $Sr(OH)_2$ and HNO_3 . 2 HNO_3 (aq) + $Sr(OH)_2$ (aq) \rightarrow $Sr(NO_3)_2$ (aq) + 2 H_2O (l)

 $H_3O^+(aq) + OH^-(aq) \rightarrow 2 H_2O(l)$

4. Write the net ionic equation for the reaction between aqueous solutions of HNO_2 and KOH.

 $HNO_2(aq) + KOH(aq) \rightarrow KNO_2(aq) + H_2O(l)$

$$HNO_2(aq) + OH^-(aq) \rightleftharpoons NO_2^-(aq) + H_2O(l)$$

5. What is the structural requirement for a substance to be classified as a base?

A base must have a lone pair of electrons.