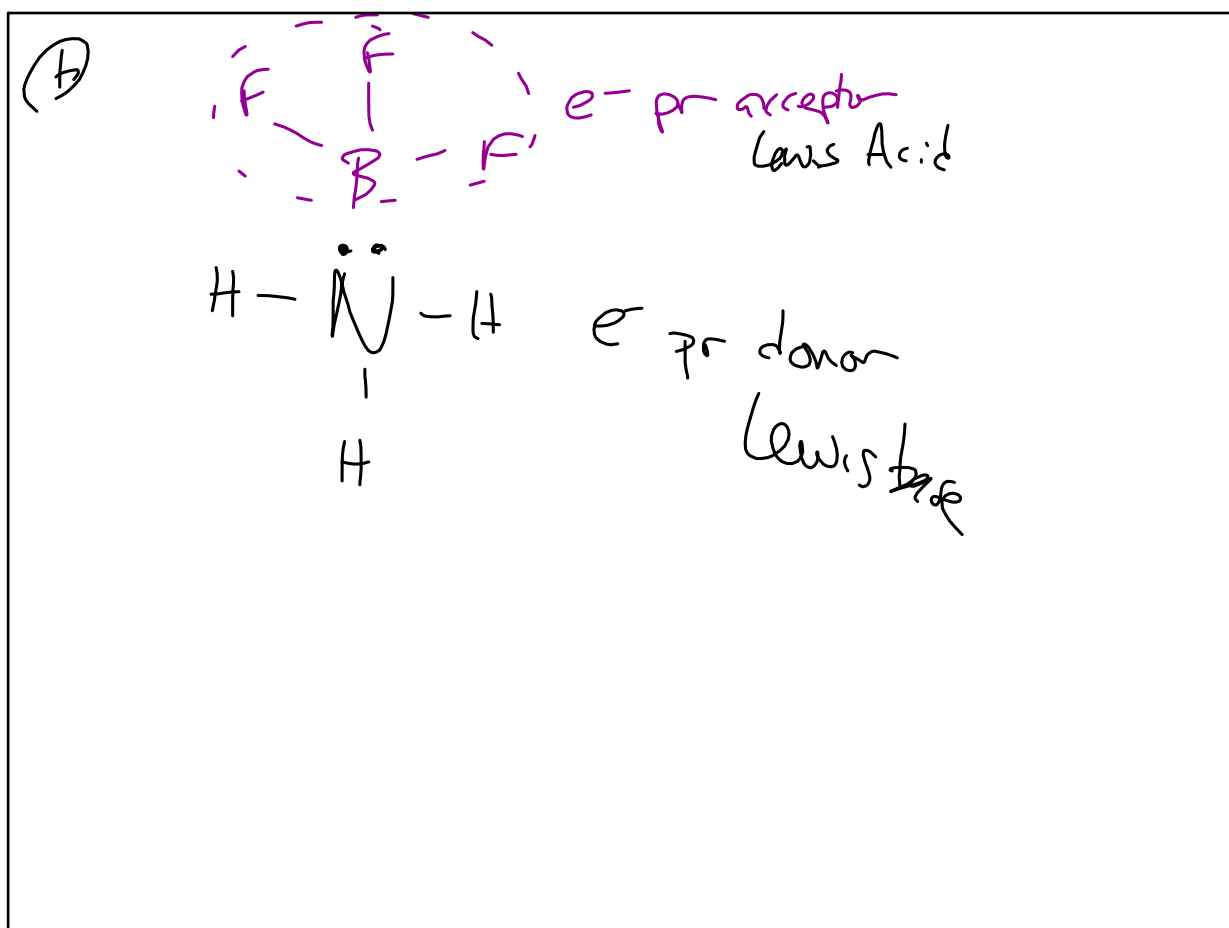
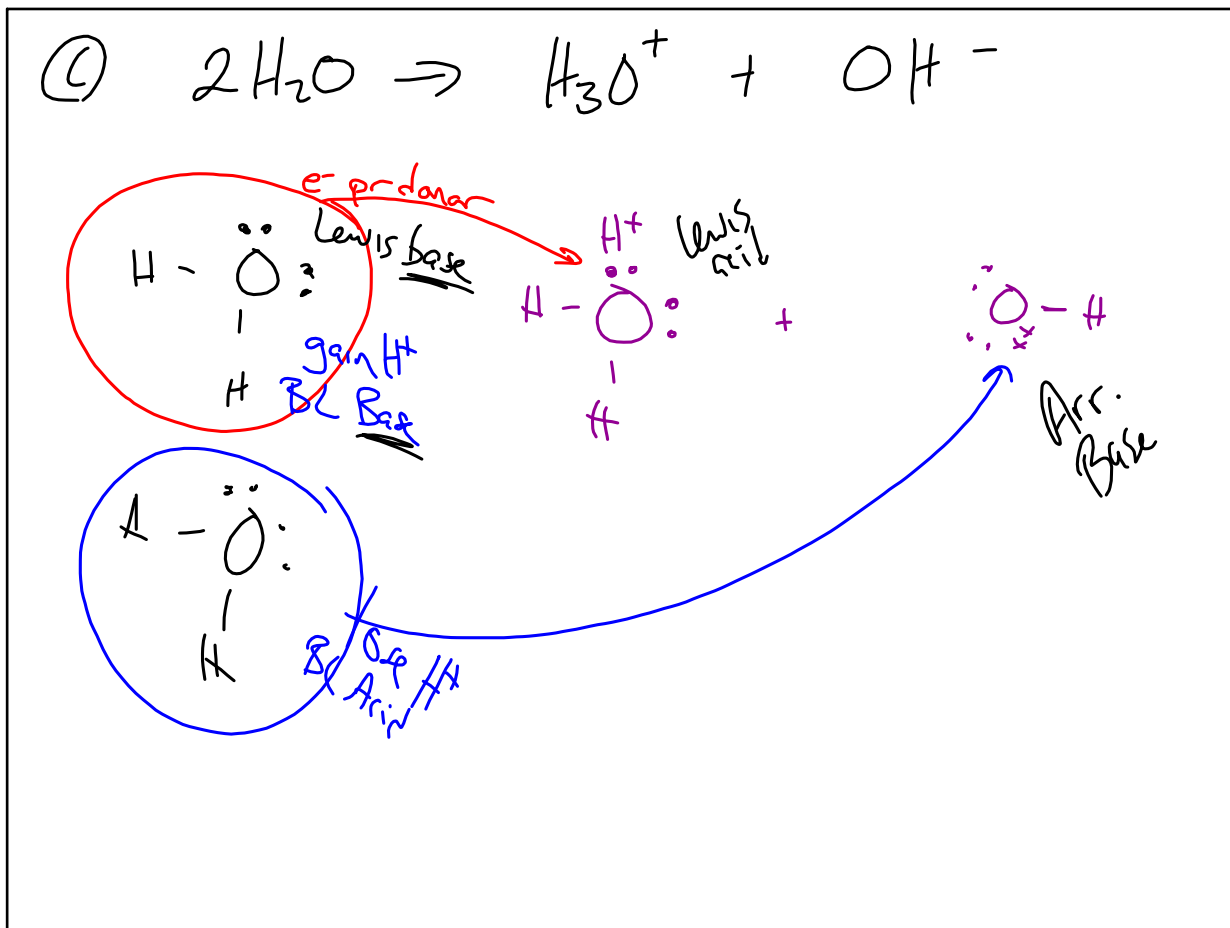


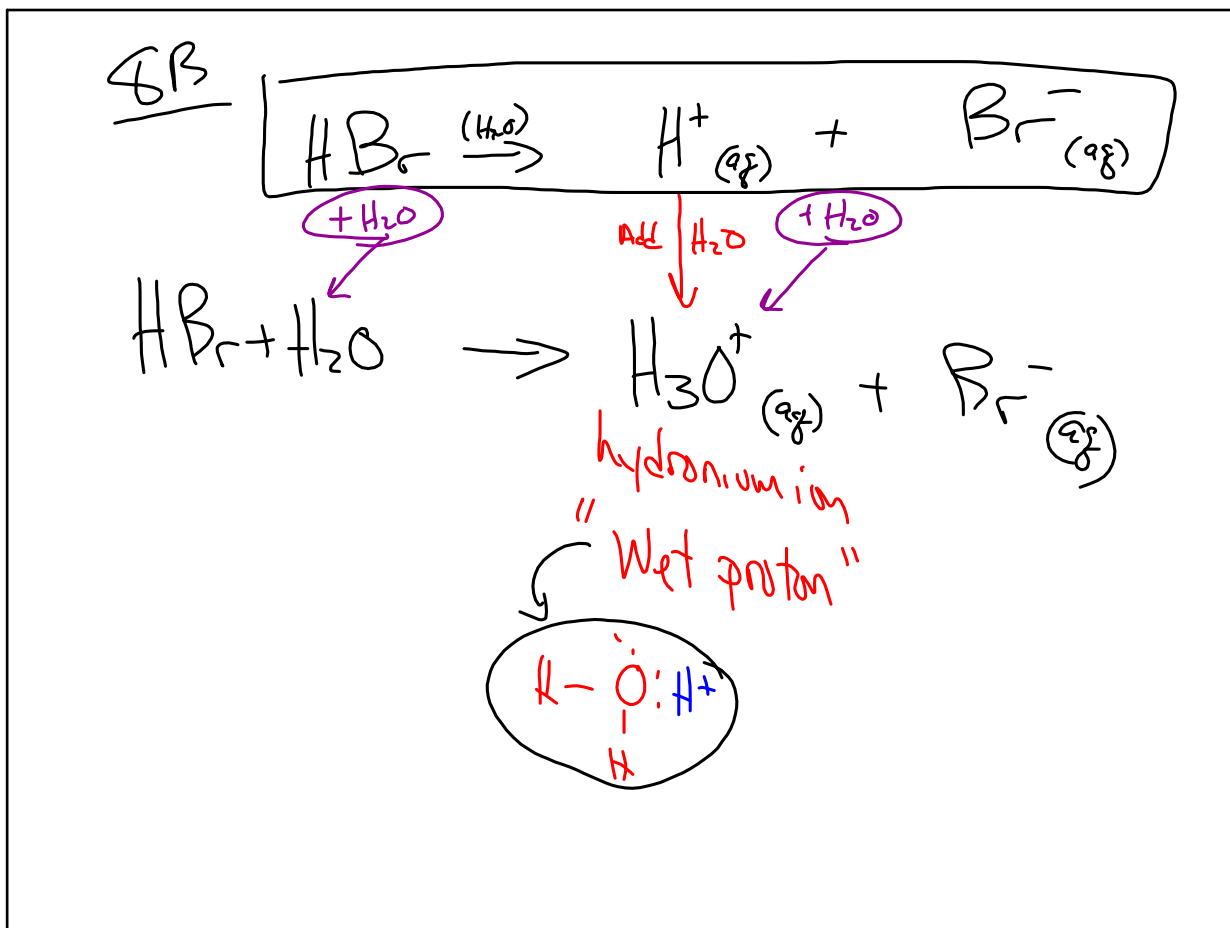
Apr 20-9:19 AM



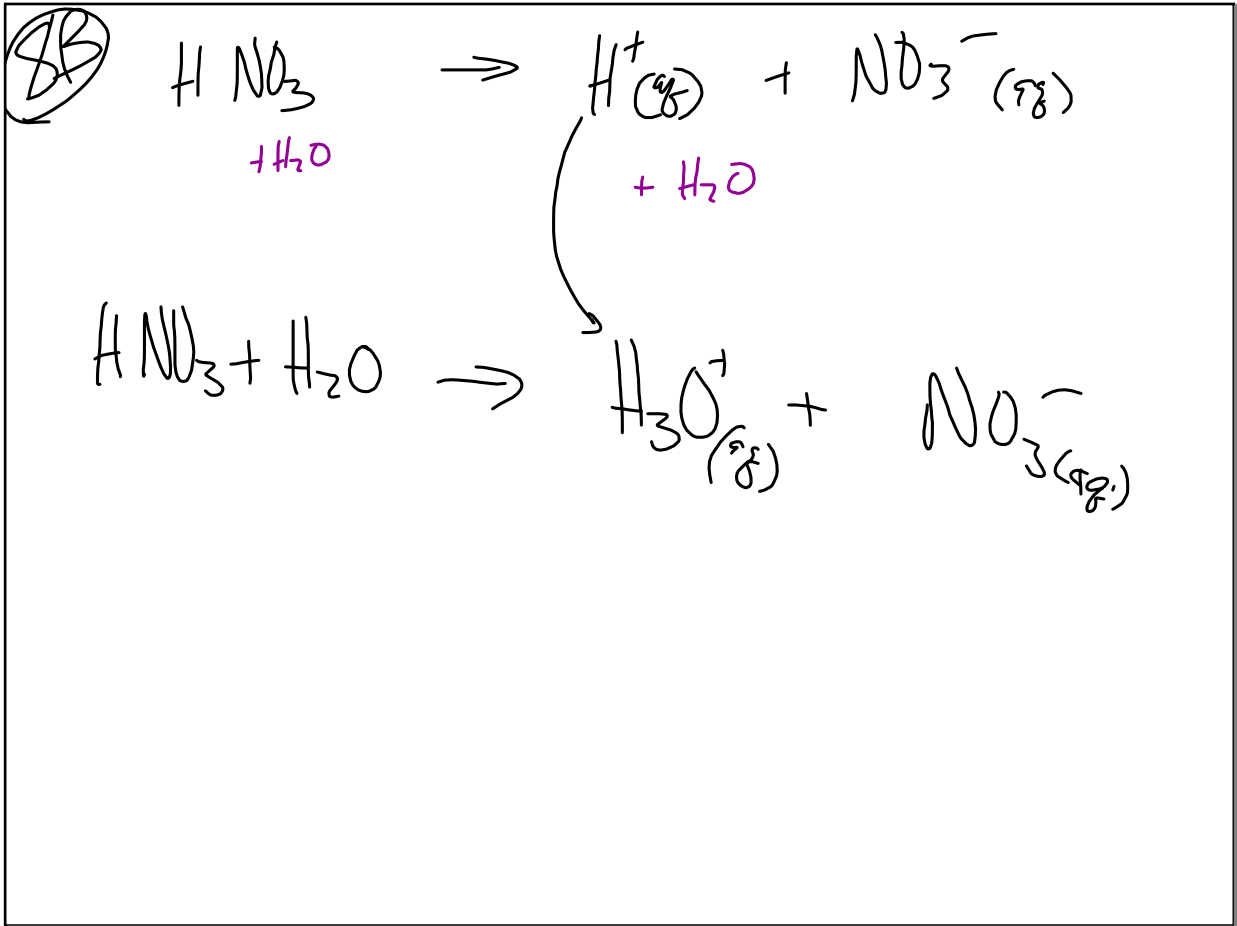
Apr 20-9:37 AM



Apr 20-9:39 AM



Apr 20-9:43 AM



Apr 20-9:46 AM

(9) Conjugate pairs → differs by **ONLY 1  $\text{H}^+$**

BL ⇒ (Acids are  $\text{H}^+$  donors  
Base are  $\text{H}^+$  acceptors)

A $\text{H}_3\text{PO}_4$	CB $\text{H}_2\text{PO}_4^-$	} $\text{H}_3\text{PO}_4 \rightarrow \text{H}^+ + \text{H}_2\text{PO}_4^-$
$\text{HSO}_4^-$	$\text{SO}_4^{2-}$	
$\text{H}_3\text{O}^+$	<u><math>\text{H}_2\text{O}</math></u> (Base)	} $\text{H}_3\text{O}^+ \rightarrow \text{H}^+ + \text{H}_2\text{O}$
<u><math>\text{H}_2\text{O}</math></u> (Acid)	OH <sup>-</sup> (B)	

Additional notes: "Amphiprotic" with arrows pointing to  $\text{H}_2\text{O}$  in both rows. "EQN" at the bottom right.

Apr 20-9:48 AM

SA

Dissociates almost completely

R  $\text{HCl} \rightarrow \text{H}^+ + \text{Cl}^-$

I	6M	}	Q		Q
C	~ 6M	}	+ 6		+ 6
E	~ Q	}	6M		6M

0.000000... day

$K_a = \text{Big}$        $\frac{\text{lots}}{\text{very little}}$

vs

WA

Does not dissociate much at all.

R  $\text{HF} \rightleftharpoons \text{H}^+ + \text{F}^-$

I	6M	}	Q		Q
C	- 0.1	}	+ 0.1		+ 0.1
E	5.9	}	0.1		0.1

← Mole ratio

$K_a = \text{Small} = \frac{\text{Small} [P]}{\text{Big} [R]}$

Apr 20-9:56 AM