

① $HZ \rightleftharpoons H^+ + Z^-$

I	0.02M	0	0
Δ	-x	+x	+x
E	0.02-x	x	x

$K_a = \frac{(H^+)(Z^-)}{(HZ)} = \frac{(1.17 \times 10^{-5})(1.17 \times 10^{-5})}{(0.02 - 1.17 \times 10^{-5})} = 6.9 \times 10^{-9}$

$pH = -\log(H^+) = 4.93$

Feb 26-8:09 AM

② $pH = ?$ 0.35M CH_3NH_2 $K_b = 4.4 \times 10^{-4}$

BASE

I	CH_3NH_2	H_2O	$CH_3NH_3^+$	OH^-
	0.35M		0	0
Δ	-x		+x	+x
E	0.35-x		x	x

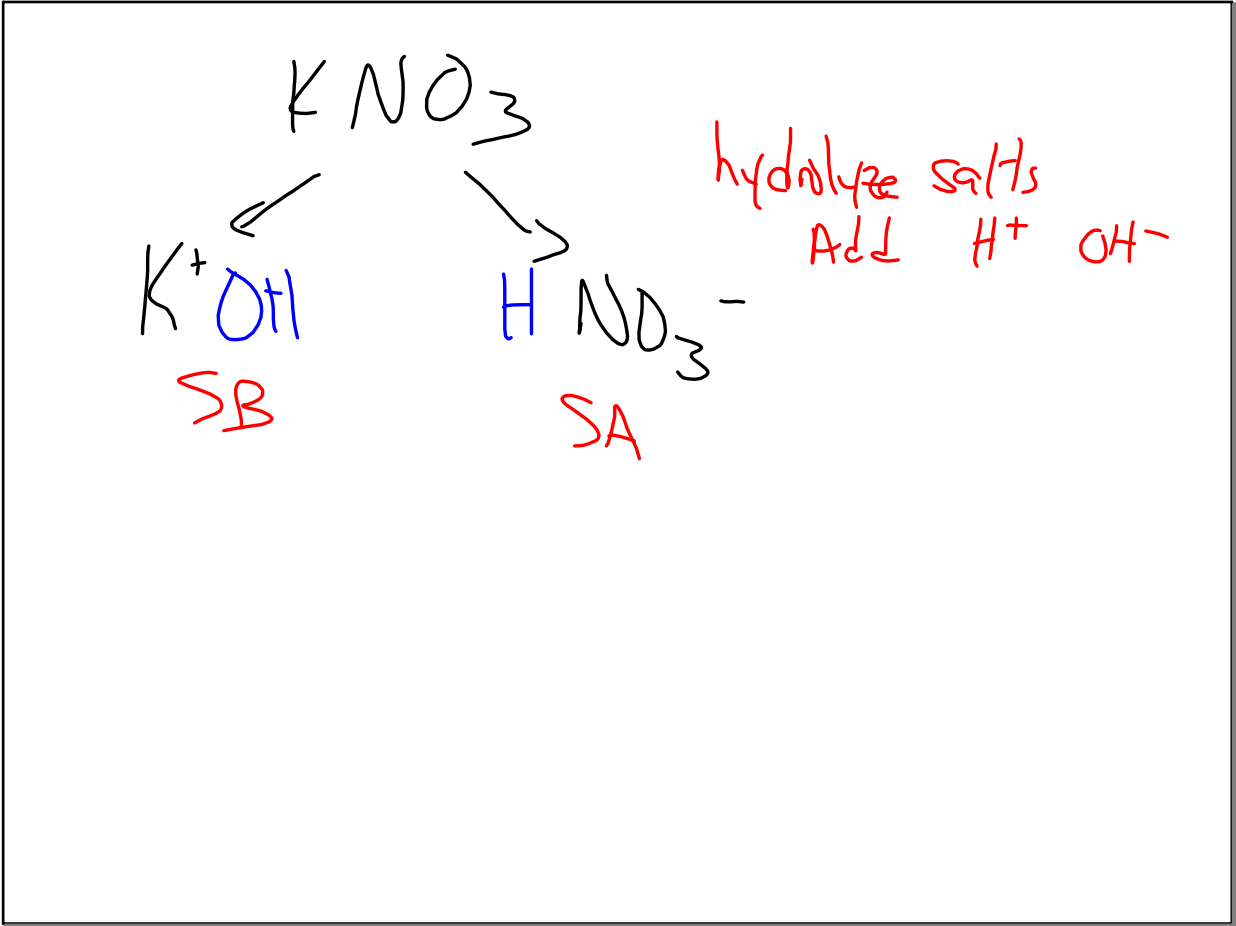
$K_b = \frac{(CH_3NH_3^+)(OH^-)}{CH_3NH_2} = \frac{(x)(x)}{0.35-x} = 4.4 \times 10^{-4}$

$[OH^-] = x = 0.0124$

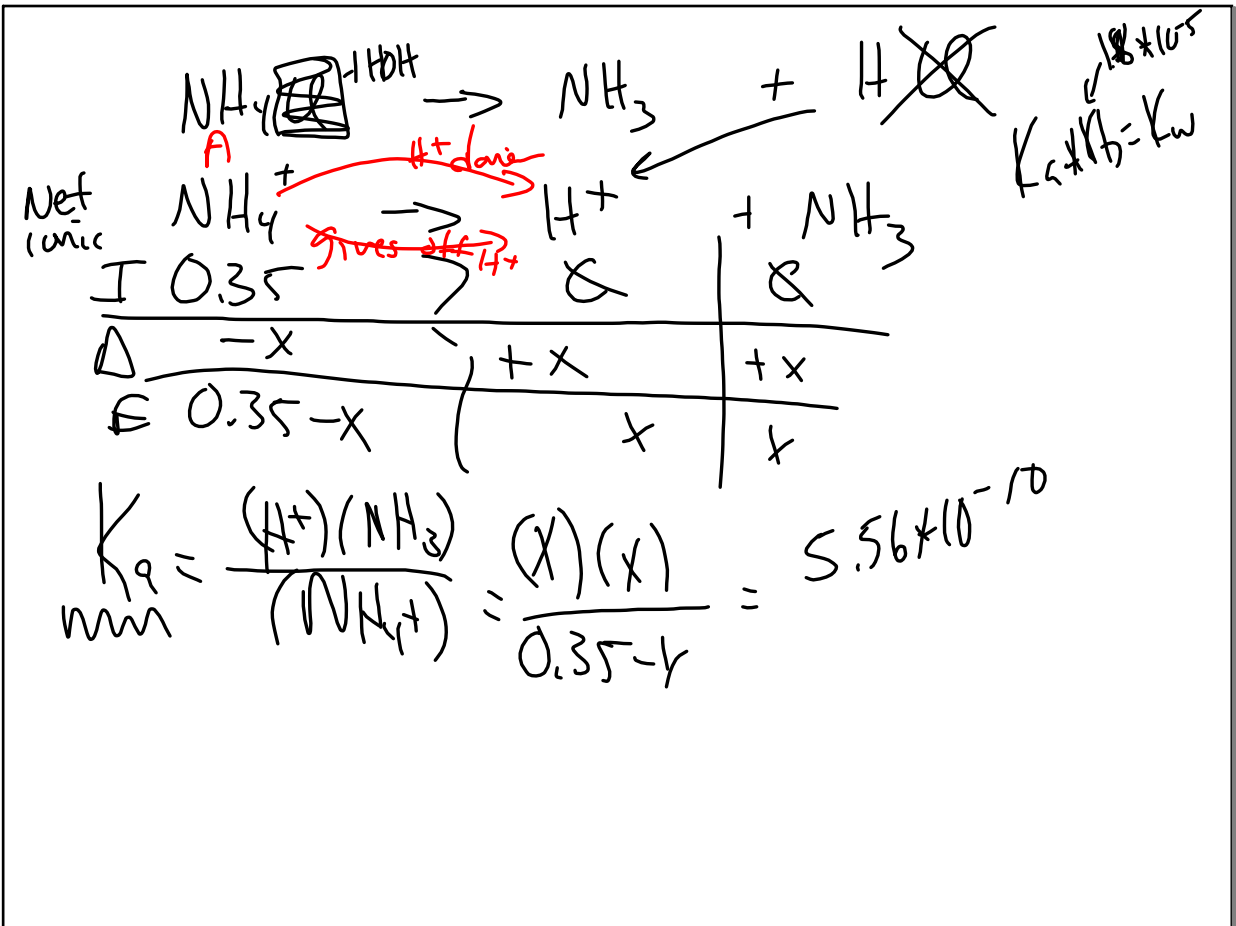
$pOH = 1.91$

$pH = 12.09$

Feb 26-8:57 AM



Feb 26-9:07 AM



Feb 26-9:09 AM

PS 16-2 EVEN #'S

Feb 26-9:14 AM