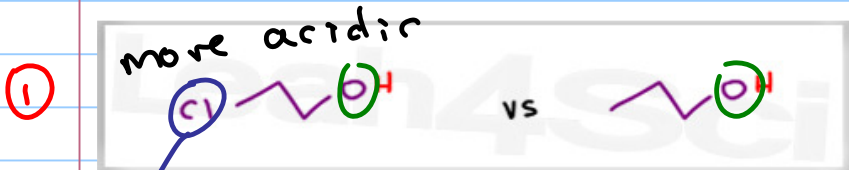


Solutions to:

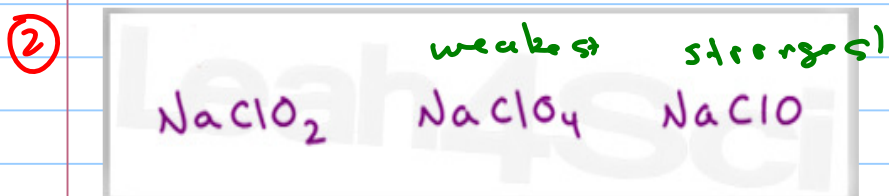
Acids + Bases Quiz

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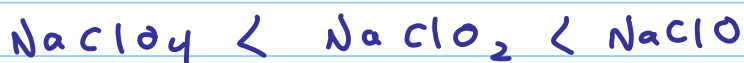


Same atom holds acidic H

Cl = e⁻ neg = inductive effect



strong base = more reactive =
less resonance



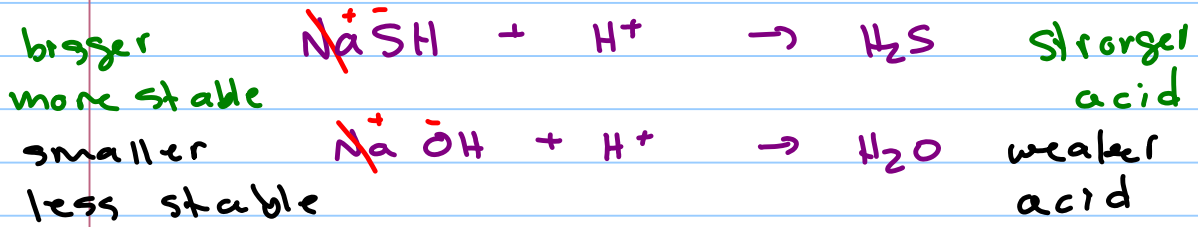
↑ K_a ↓ pK_a = stronger acid = weaker base



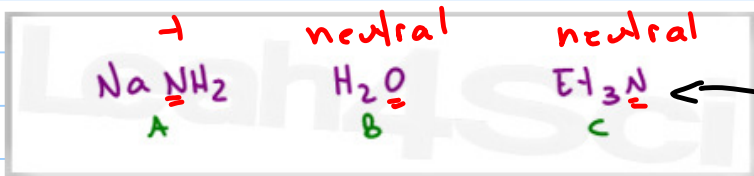
↑ K_a ↓ pK_a = stronger acid



5



6

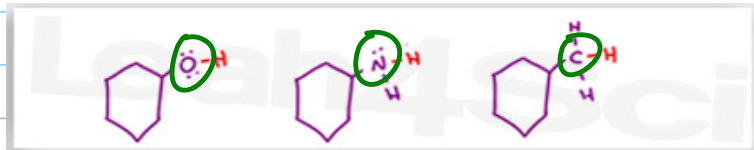


Et = ethyl
 $(\text{CH}_3\text{CH}_2)_3\text{N}$

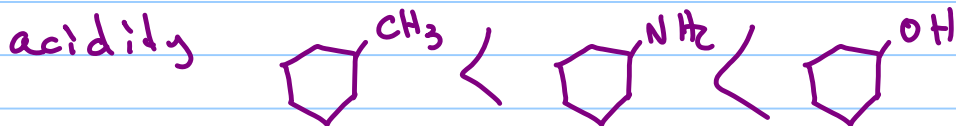
strong acid = weak base

$\text{H}_2\text{O} < \text{Et}_3\text{N} < \text{NaNH}_2$ base strength

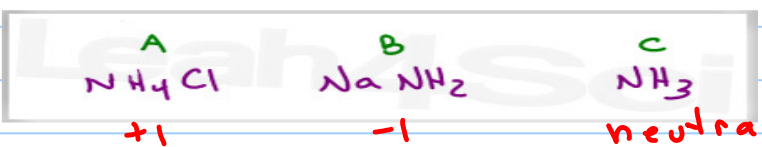
7



eneg $\text{O} > \text{N} > \text{C}$

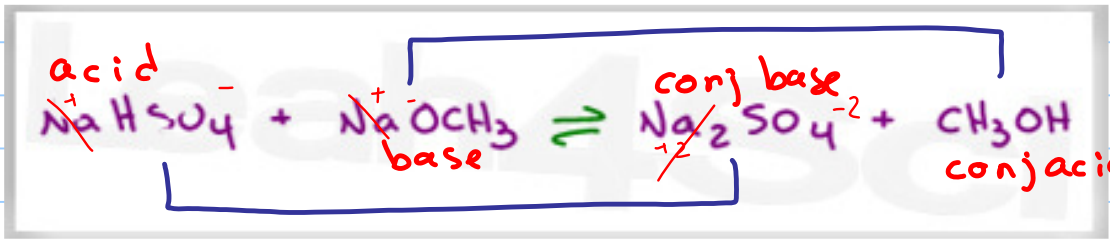


8

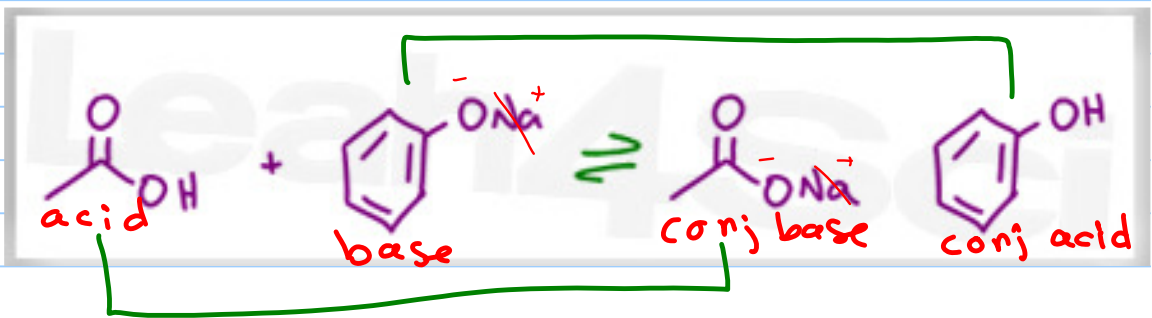


acidity $\text{B} < \text{C} < \text{A}$

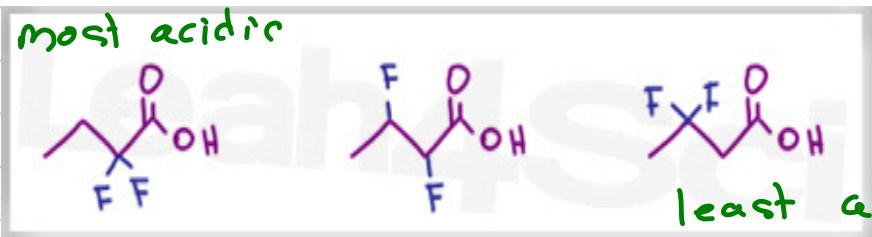
9



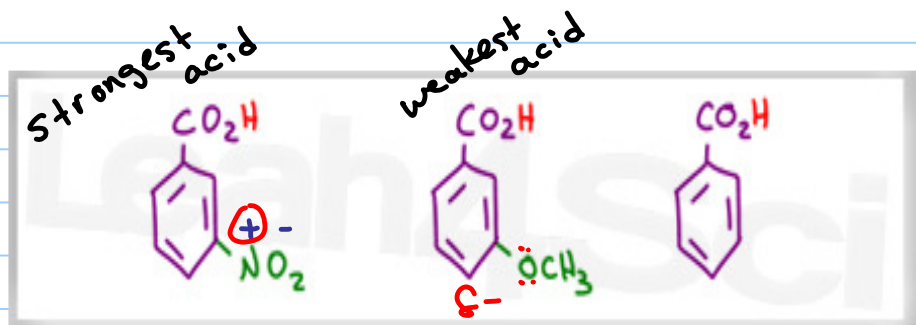
10



11



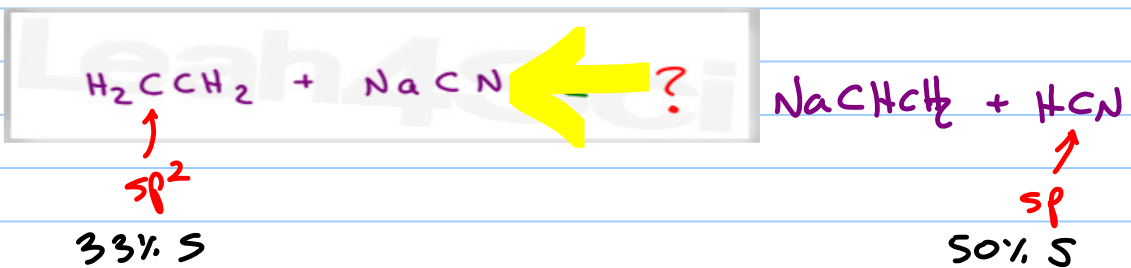
12



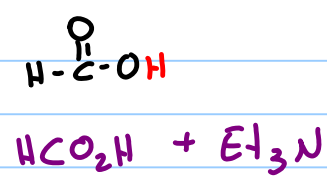
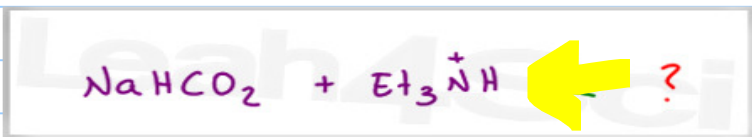
Inductive effect

-I/- induction increases acidity

13



14



15

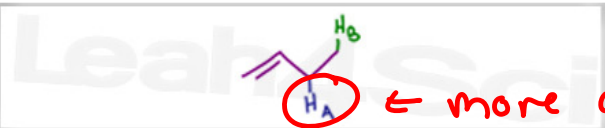


Stronger acid
 = forms weaker
 conj base

weaker acid:
 Stronger conj
 base

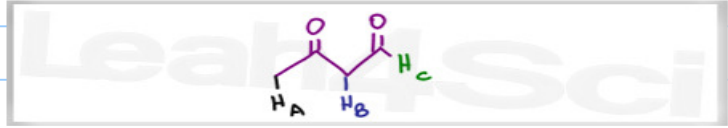
sp² should be more acidic BUT aniline regains N resonance upon deprotonation

16



\leftarrow more acid due to resonance

17



no resonance \rightarrow $\text{H}_c < \text{H}_a < \text{H}_b$ \leftarrow 3 res forms

18



more acidic

less acidic

both conjugates
 are neutral

19



C is more e⁻ neg vs H, pulls (+) from +N = less acidic with ↑ attached C

or... neutral N = more neg w/ ↑ # C

20



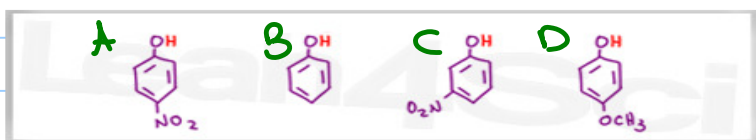
conjugates = neutral

+ on more e⁻ neg atom = unhappy

+O unhappy, forms more stable conj.

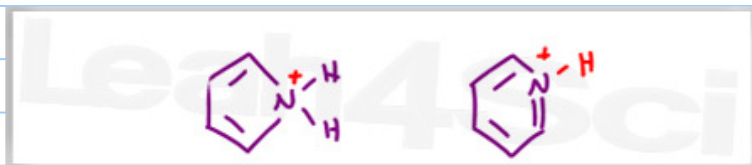
Bonus Q's - detailed solution in video (details next page)

1



D < B < C < A

2



stronger → reforms aromaticity

Step by step video solutions

- answers
- explanations
- drawn out reactions
- Q&A

+ Many more practice quiz/exams
+ solution videos

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