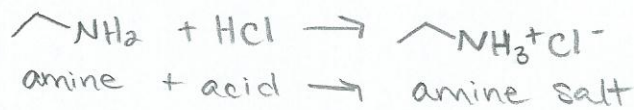


Amines

$\overset{\cdot\cdot}{\underset{|}{\text{N}}}$ - a nitrogen bonded to three things (hydrogens or carbons) with one pair of unshared electrons

- trigonal pyramidal geometry
- $\text{C}_n\text{H}_{2n+3}\text{N}$
- nomenclature: NH
- common name is naming the alkyl groups
"methyl ethyl amine"
- IUPAC name is smaller alkyl group + longer
"N-methyl ethanamine"

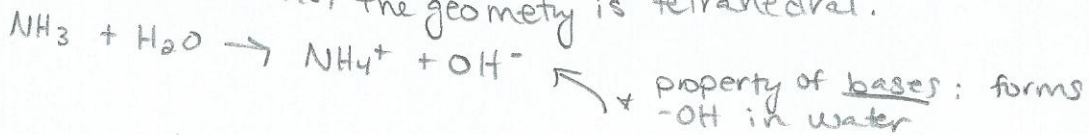
• neutralization of amines forms an amine salt:



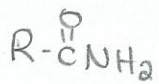
• amine salt + base \rightarrow uncharged amine
"free base"



• in ammonium cations, the geometry is tetrahedral:

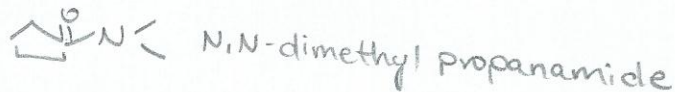


Amides



• a nitrogen directly attached to a carbonyl carbon

• nomenclature:

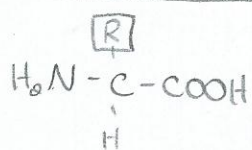


• amidation:

amine + carboxylic acid \rightarrow amide + water



amino acids



- group according to sidechain (R)... this determines the amino acid
- peptide bonds link the residues together

ex. tripeptide

