1) NaOH, Δ
2) NaOH, Δ
3) H⁺

Easily separated (different physical properties)

HCl

RR → diastereomers

SR
difficult to separate (same physical properties)

Now separate

R - N - R → R - N - R

H₂O → R - N - R

Clear polypeptide
Carboxylic acids + derivatives
  - Relative reactivity of carbonyl compounds
  - Acidic vs. basic; other mechanisms of carbonyls (enolates)
  - Esterification (hydrolysis; cationic)
  - Saponification (anionic) + diazomethane
  - Reversibility
  - How to make esters + amides (SOCl₂)
  - Alkylation & reduction → DIBAL-H; “Other” LiAlH₄, vs. NaBH₄
  - Lactones + lactams

Types of problems: mechanism, synthesis, fill-in-the-blank, nitriles
  - Transesterification

Enolates
  - pKa’s
  - α-Halogenation (Including haloform)
  - Aldol, mixed aldol, Claisen, Dieckmann, Michael, Robinson, Stork α-alkylation

When given a product, which reagent was used to make it:
  - Malonic ester synthesis

Amines
  - 7 ways to make an amine, including the Curtius & Hofmann rearrangements
  - Acid/base properties of amines
  - Gabriel synthesis

Carbohydrates + Amino Acids

5/9/12 → Stability of carbonates + carbamic acids