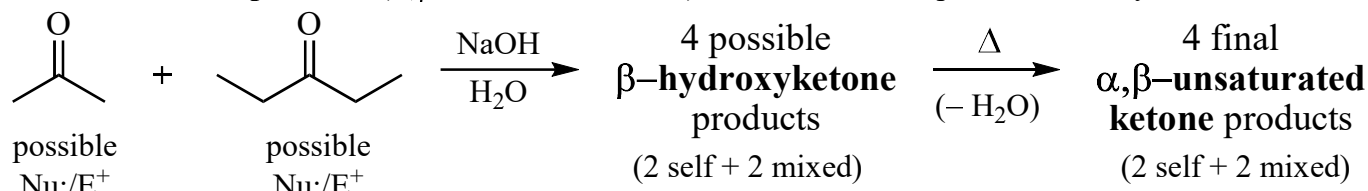


"Messy Aldol" Homework

Name: _____

Before working on this homework, review Mechanisms 21.4, 21.6 and work on SkillBuilders 21.2, 21.3.

Predict the possible aldol products for the following reaction (**provide 8 structures**). Choose one of the **mixed aldol final products** (α,β -unsaturated ketone) and show the complete base-catalyzed mechanism.



draw the four
Aldol Reaction
products
(β -hydroxyketones)

Δ
(- H₂O)

draw the four
Aldol Condensation
products*
(α,β -unsaturated
ketones)

*Choose one of the **MIXED Aldol Condensation products** (C₈H₁₄O) and draw a **base-catalyzed** mechanism for its formation, starting from acetone and 3-pentanone. Mind the details: curved arrows, charges, lone pairs.