This mechanism is closely related to the Robinson annulation, except it involves two Michael reactions instead of one Michael and one aldol. Practice all of the mechanisms from lecture so that you can do them quickly (and recognize them).
Optional Problem Solving Session
Answer Key

b) 

- Make \( \text{O-H} \)
- Break \( \text{C4-C5 II} \)
- Break \( \text{C6-C1 II} \)
- Break \( \text{C10-C5} \)

- Under acidic conditions, always protonate first!
- This will usually get you started on the right track.

- Makes \( \text{C4-C5 II} \)
- Breaks \( \text{C5-C6 II} \)

- Breaks \( \text{C1-C10} \)

- Sometimes confusing to keep track of II-bonds in phenyl rings.

- Makes \( \text{O-H} \)

- Breaks \( \text{C4-C10} \)

- Think about all resonance structures 🟢

- You should recognize that you have to do some alkyl shifts just from looking at the rxn.
- Make sure you do successive 1,2-migrations, not 1,3-migrations.
Optional Problem Solving Session
Answer Key

Remember: protonate first; always keep R⁺ stability in mind.

Be able to recognize common rearrangements of R⁺ that we have discussed in lecture.

(like the Pinacol!)
Problem Set 7 (Optional) Answer Key

d) This one is challenging!

\[ \text{make} \]
- C7-C3
- C3-C2
- C1-C6

\[ \text{break} \]
- C7-C3
- C2-C1
- C6-C0

In this run, the familiar fragmentation is the Grob.