

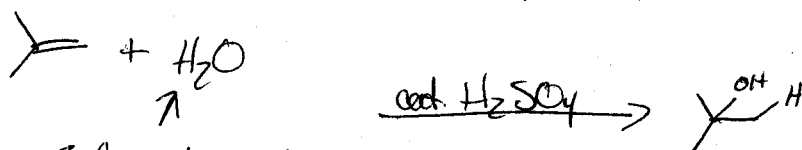
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Exam 1 on Wed.

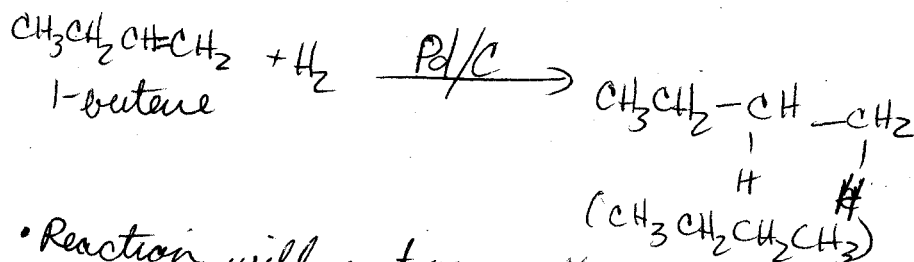
⇒ Must take exam in assigned location!! (Website)

• Review Session Tomorrow @ 5pm. B371

Recall: acid-catalyzed hydrationSolvent and
reactant

Another example of catalysis - Hydrogenation of alkenes

Ex:



• Reaction will not occur w/o catalyst

Heterogeneous catalyst: does not dissolve; rxn occurs at a macroscopic surface

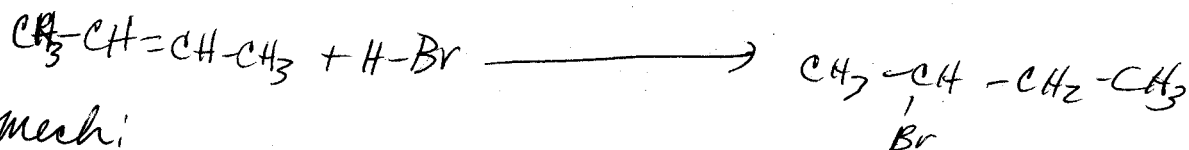
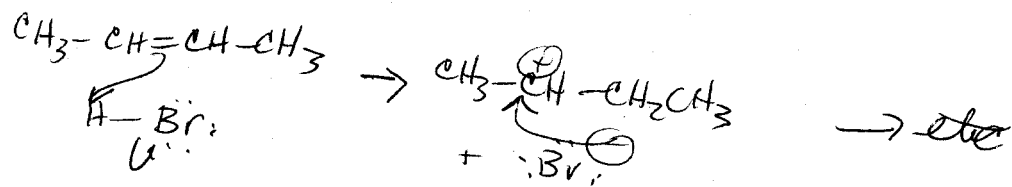
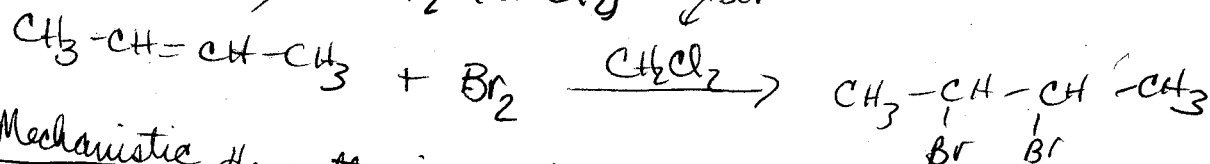
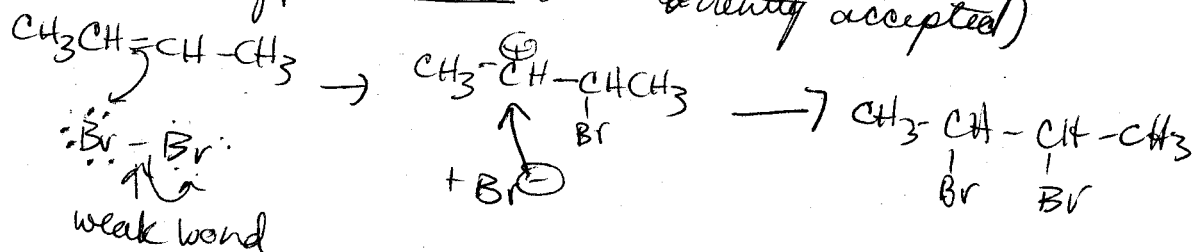
Chap 5 - Further Add'n Rxs of alkenes

* Rec. Probs: 1-22, 27-38, 40, 45-50.2 Perspectives on a Reaction:

1. mechanism
2. the transformation itself

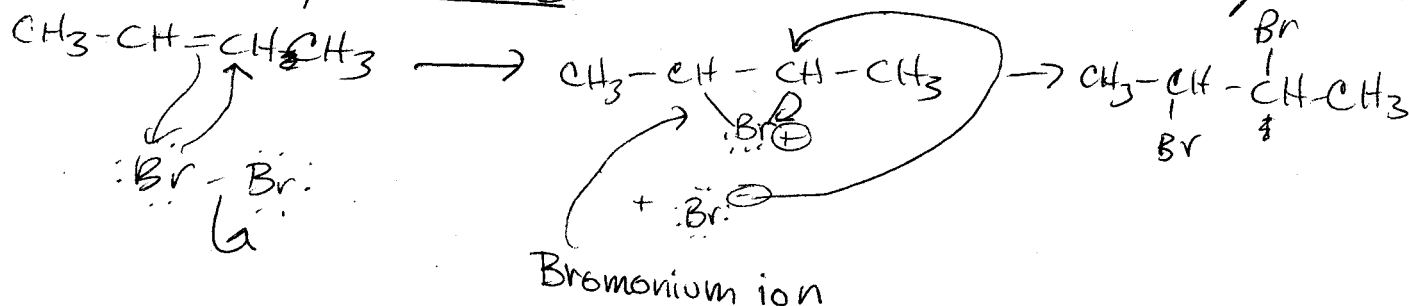
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Recall:Mech:New Addition Rxn: Br_2 (or Cl_2) solventMechanistic Hypothesis #1 (NOT currently accepted)

• anytime two electronegative elements are bonded, usually reactive

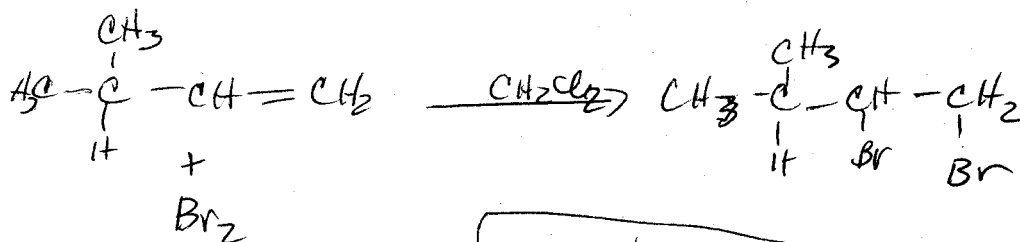
Mechanistic Hypothesis #2:



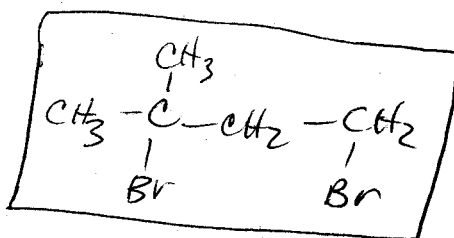
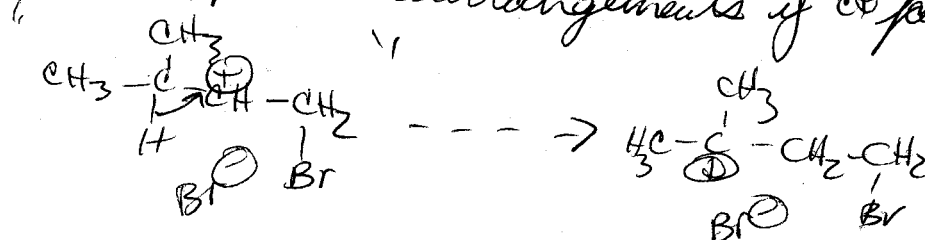
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An observation that favors #2 over #1



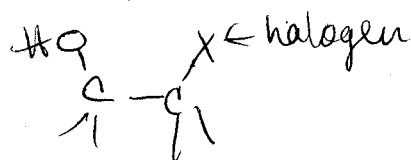
NOT OBSERVED:

Recall: Expected rearrangements if C^+ formed

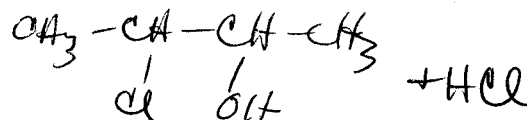
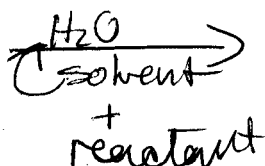
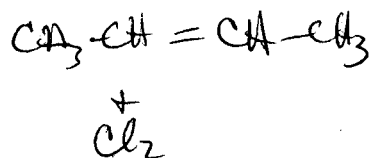
∴ Conclude that Hypothesis #1 is not correct

Variation: Halohydrin formation

Halohydrin

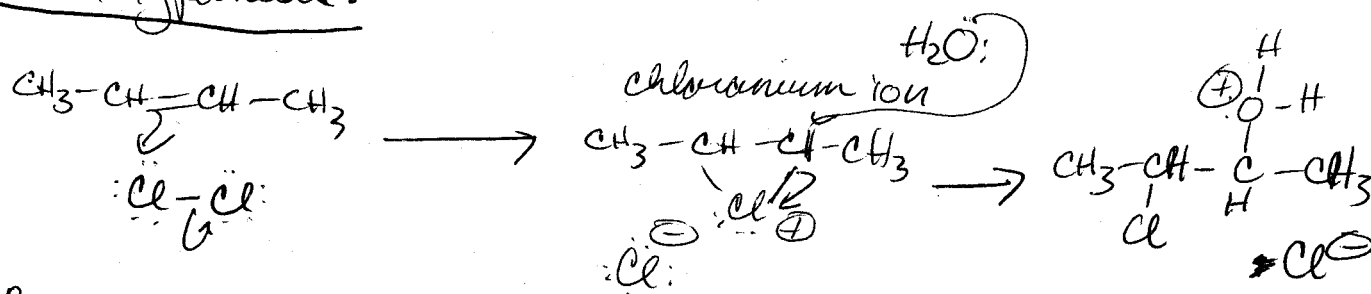
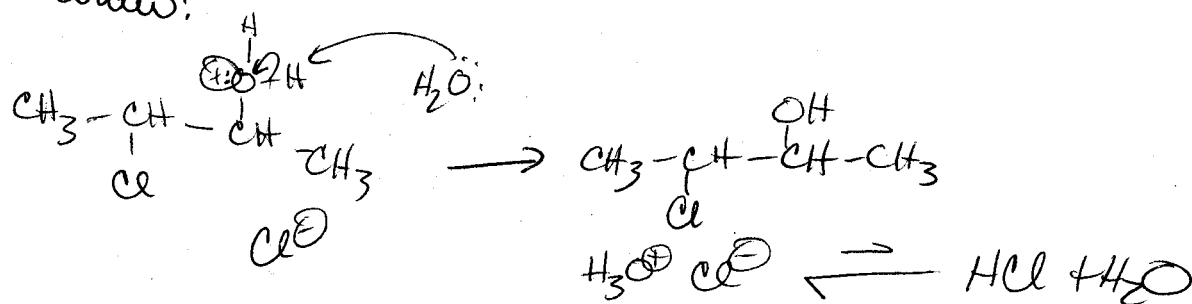


ex:



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Mech: Hypothesis:Redraw:

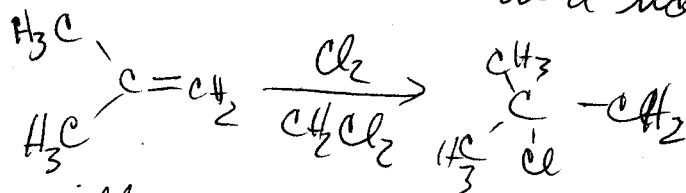
H-Cl ← stronger acid

vs
H-OH₂⁺

thus...

vs
:OH₂ stronger base

Note: No regiochemical question for Cl₂ or Br₂ addition to an unsymmetrical alkene in a non-interactive solvent (CH₂Cl₂)



• Will matter for halohydrins; 2 different groups (Cl + OH)
(Regioselectivity exists)

