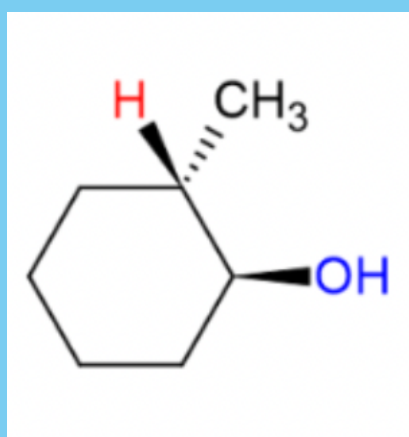


# HYDROBORATION OXIDATION OF ALKENES

## Organic Chemistry 1

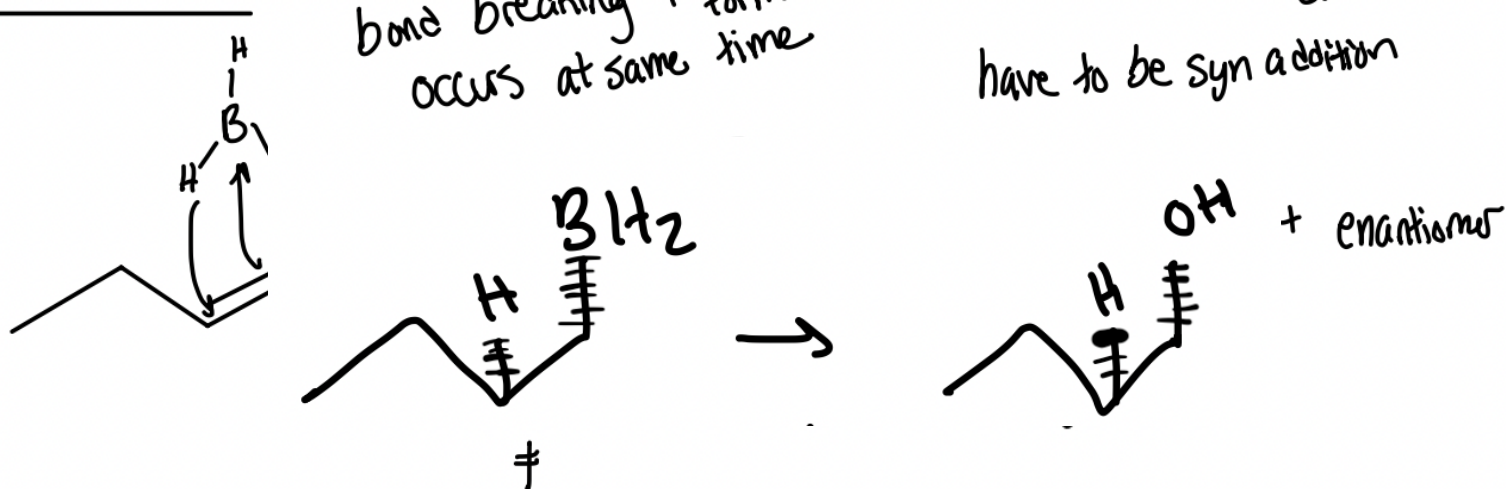
### KEY FEATURES

1. Anti MKV (Hydrogen to more sub and BH<sub>2</sub> to least sub.)
2. No carbocation formation
3. No rearrangements
4. Stereospecific syn addition (cis stereochemistry)



from chemistrytalk.org

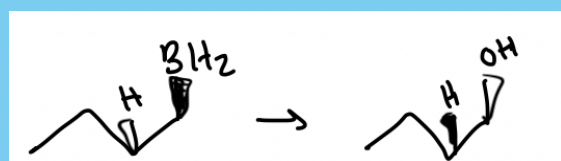
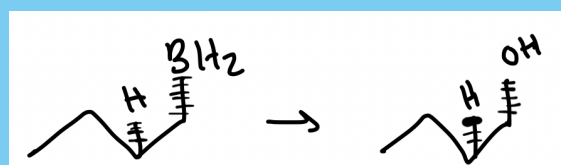
### Mechanism:



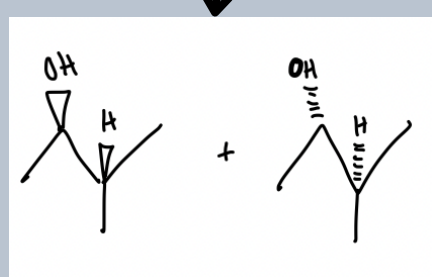
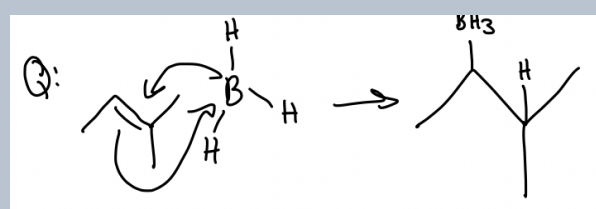
### A BIT ABOUT THE OXIDATION MECHANISM

For Orgo 1 the oxidation mechanism is not required, but there is merit in understanding what the mechanism tells us... it replaces BH<sub>2</sub> with OH<sup>-</sup> and retains stereochemistry + regiochemistry

so whatever the stereo/regio of the BH<sub>2</sub> is, the OH will have that after oxidation



This reaction still has cis stereochemistry with both wedges...the wedges just aren't filled in



### HOW TO PREDICT PRODUCTS

Remove the double bond, place the hydrogen on the most substituted spot and the OH on the less substituted, make sure to exhibit cis stereochem (both wedges or both dashes)