

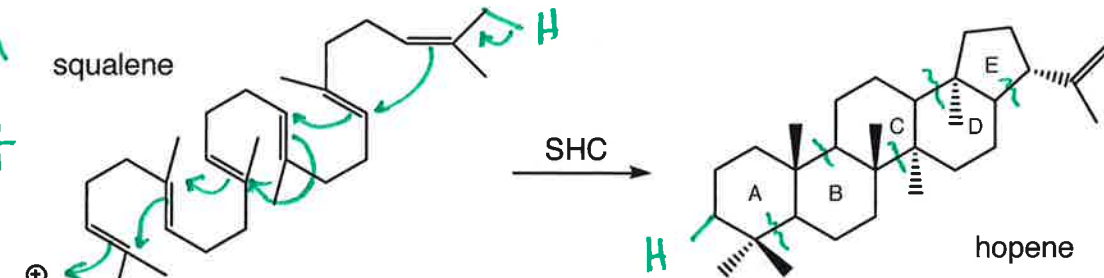
### Quiz B

Definition: A reasonable mechanism shows mechanistic arrows, lone pairs on the atoms sharing or receiving them, any intermediates, all formal charges and representative resonance forms.

Hint: To decipher what's going on in a reaction, determine if any carbon atoms are gained or lost. Map out the bond breaking/making that must occur. Consider numbering the structures on each side of the reaction. Stick to mechanisms we have studied. If you are making up a new mechanism, chances are it is wrong.

- The reaction below, catalyzed by squalene hopene cyclase (SHC), is the bacterial equivalent of how humans make cholesterol. Put mechanistic arrows on the first structure that lead to the second structure. There are no intermediates. Don't worry about stereochemistry.

*this amazing transformation occurs in one step (!) but it can be drawn out in separate steps (try it)*



*6 AdE + something close to E1*

- Draw a reasonable mechanism for the reaction below (if it is clearer to you, you can draw a mechanism for the reverse reaction). This reaction requires parts of several mechanisms we have studied.

