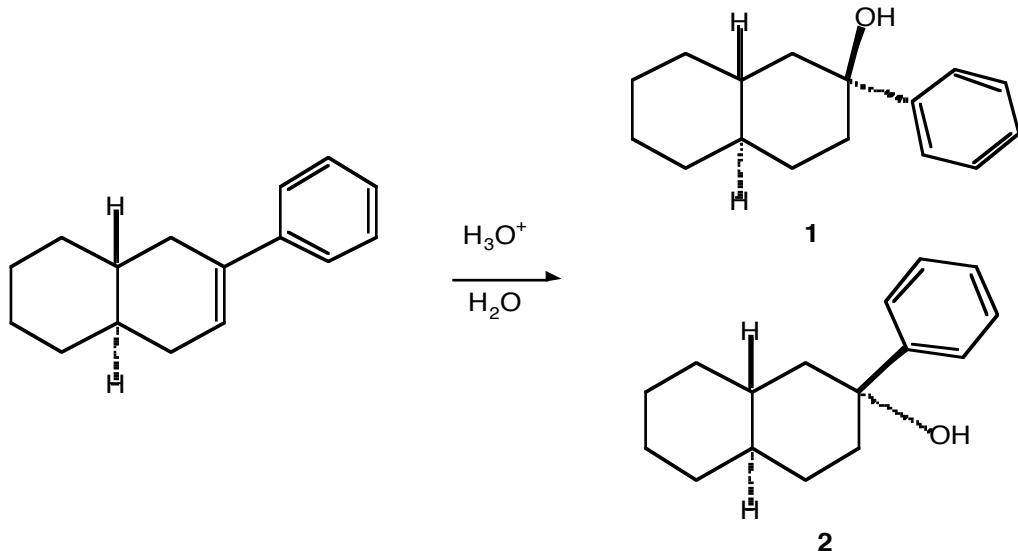


Problem 41, Chemistry 301X -2006

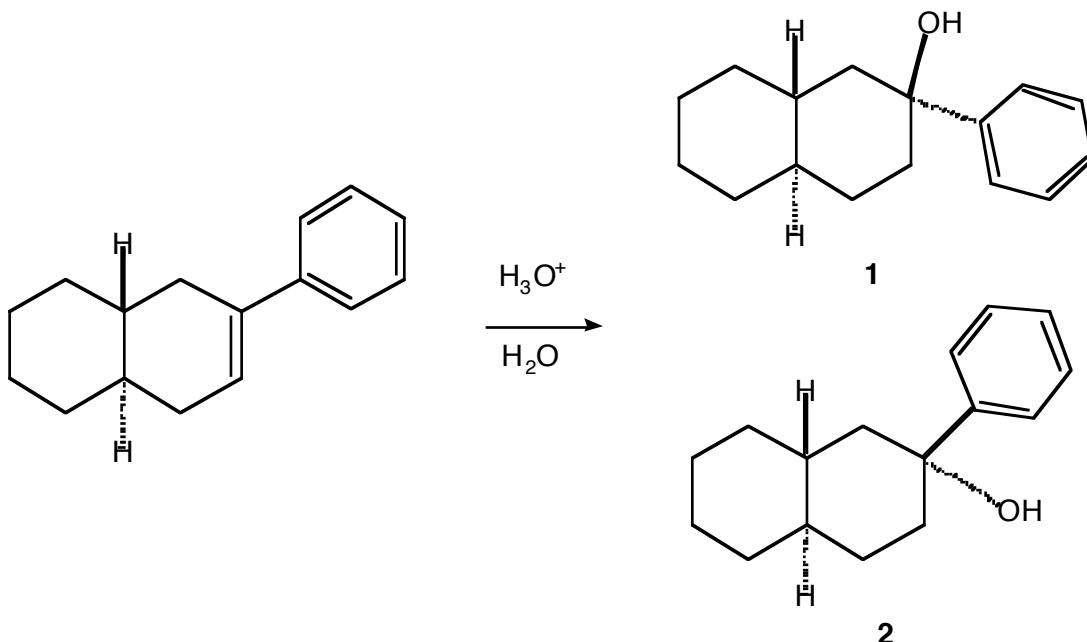
Even if you think you have this one, **make sure you get all your answers checked.**

You should know not only why the ring is “down” not “up” but two reasons why the OH winds up adjacent to the ring and not on the other carbon of the starting alkene.

Write an arrow formalism mechanism for the following reaction. Explain why **1** is formed, but **2** is not.



Be sure to give us **two** reasons why the OH winds up adjacent to the ring and not on the other carbon of the starting alkene.



When the “wrong” product **2** is subjected to the reaction conditions (acid, water) the right product **1** is formed. Write **two** possible arrow formalism “mechanisms” for this change.