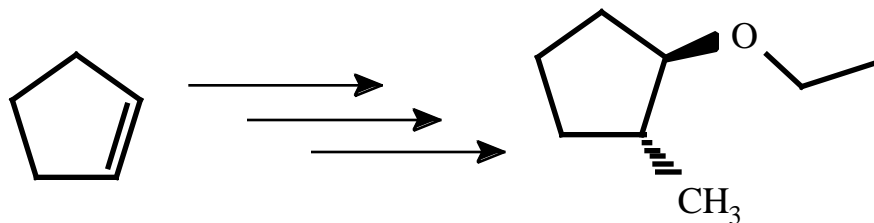


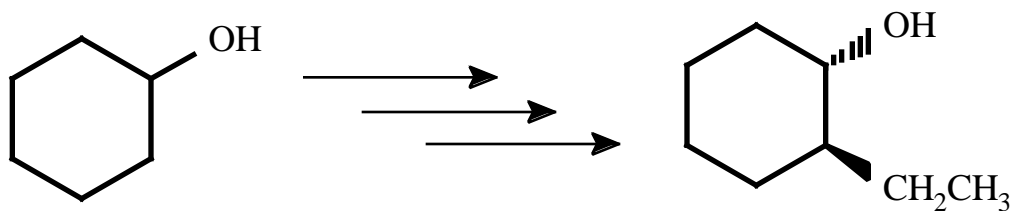
These problems require knowledge of the reactions in *Chapter 17 & 18* of "*Organic Chemistry, 5th Ed.*" (John McMurry; Brooks/Cole 2000)

For the following 3 problems, you may use any reagents/reactants you wish. Each synthesis should take approximately 3 steps.

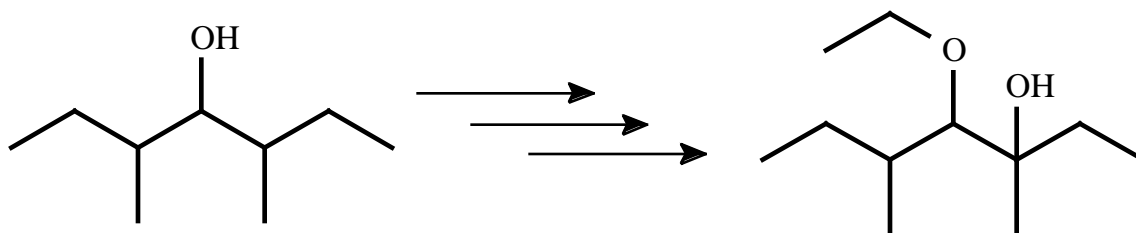
1.



2.



3.



4. You may use *2-butanol* as your *only source of carbon atoms in the product!* However, you may need to use it more than once.

