

# CHEM HELP *ASAP*

## Organic Chemistry Problem Set Solutions

### Classifying S<sub>N</sub>2, S<sub>N</sub>1, E2, and E1 Reactions

Instructions: For the questions below, classify each reaction as S<sub>N</sub>2, S<sub>N</sub>1, E2, or E1 and provide the structure of the product.

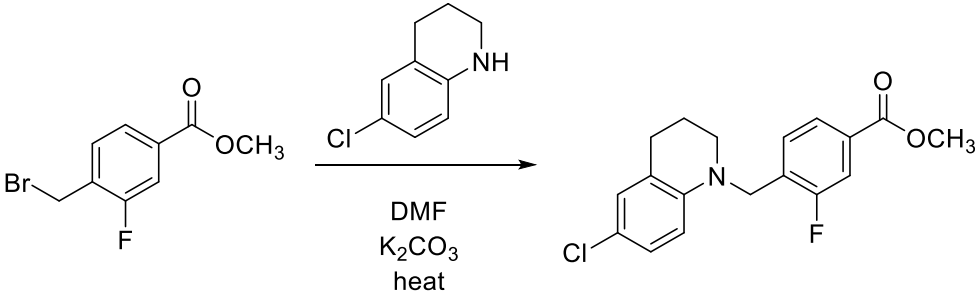
Suggested playlist:

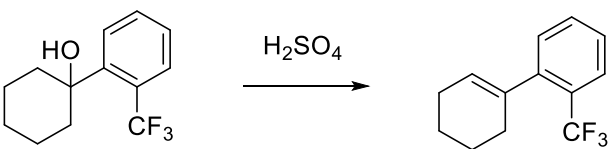
[https://www.youtube.com/watch?v=f7RCGePoTYM&list=PLIzSRqjN72jfODgSubs9\\_6dv7w7iGJN9q&index=1](https://www.youtube.com/watch?v=f7RCGePoTYM&list=PLIzSRqjN72jfODgSubs9_6dv7w7iGJN9q&index=1)

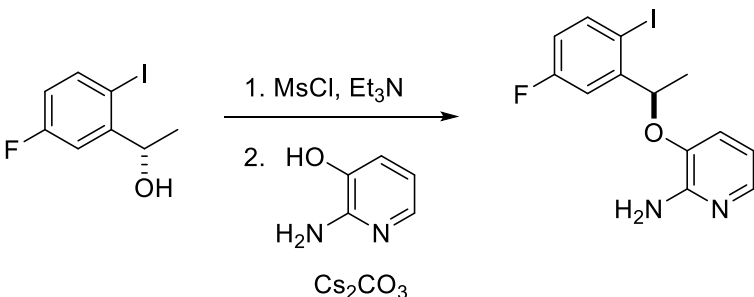
YouTube video of answered questions:

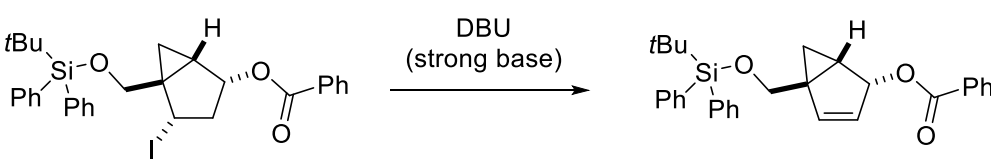
<https://youtu.be/f90pvghITDo>

Questions:

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1. COC(=O)c1cc(F)cc(Br)c1.C1CCNCC1c2ccc(Cl)cc2>>COC(=O)c1cc(F)cc(CN2CCNCC2c3ccc(Cl)cc3)c1  
DMF  
K<sub>2</sub>CO<sub>3</sub>  
heat
- 

2. C1CCC(CC1)(O)c2ccccc2C(F)(F)F>>C1=CCCCC1c2ccccc2C(F)(F)F  
H<sub>2</sub>SO<sub>4</sub>
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3. CC(O)c1cc(F)cc(I)c1.NC1=CC=C(N)C=C1>>CC(Oc1cc(F)cc(I)c1)c2cc(F)cc(N)c2  
1. MsCl, Et<sub>3</sub>N  
2. HO-C<sub>5</sub>H<sub>3</sub>N<sub>2</sub>  
Cs<sub>2</sub>CO<sub>3</sub>
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4. C12CC3C(C1)C(I)C2C3OC4(C)C(C)C(C4)C5=CC=CC=C5C6=CC=CC=C6C7=CC=CC=C7>>C12CC3C(C1)C=C2C3OC4(C)C(C)C(C4)C5=CC=CC=C5C6=CC=CC=C6C7=CC=CC=C7  
DBU (strong base)

