An ochem sampler. Print out these pages. Can you add the curved arrows? Look closely and you will see you can do all of them whether your class discussed them or not. Print out the next set and repeat those problems.

1.

2. An S_N 1 solvolysis reaction of (R)-(1-chloroethyl)benzene to give rac-1-phenylethanol.

3. An E2 elimination reaction of hydrogen chloride from 1-chlorooctadecane with potassium tert-butoxide to give 1-octadecene. (See Notes.)

4. A synthesis of 3-hexyne from trans-3-hexene by bromination and two elimination reactions. (See Notes.)

5. Addition of hydrogen bromide to propene to give 2-bromopropane. (See Notes.)

6. Addition of hydrogen bromide to 3-methyl-1-butene to give after rearrangement, 2-bromo-2-methylbutane. (See Notes.)
7. Bromination of methylcyclohexene to give (1R,2R)- and (1S,2S)-2-bromo-1-methylcyclohexanol.

8. Acid catalyzed Baeyer-Villiger oxidation of 2,2-dimethylcyclopentanone with peracetic acid.

9. A reverse-forward Diels-Alder reaction between cyclopentadiene and maleic anhydride.

10. Formation of the cyanohydrin (2-hydroxy-2-methylpropanenitrile) from acetone. (See Notes.)

11. Base hydrolysis of octyl isobutyrate to give octanol and isobutyric acid. Step 1, treatment with base. (See Notes.)

12. Oxidation of cyclohexanol to cyclohexanone with sodium hypochlorite (NaOCl, bleach).
13. Acid catalyzed bromination of acetophenone to give α-bromoacetophenone. (See Notes.)

14. Reaction of the ketone with hydrazine under basic conditions to form the hydrazide.

15. Friedel Crafts acylation of benzene.

16. Nucleophilic aromatic substitution of 1-fluoro-4-nitrobenzene with ammonia to give 4-nitroaniline. (See Notes.)