

Answers to Problem 95, Chemistry 301X - 2006

These are good answers. There may be others that are acceptable, at least at this early point. I suspect this question was very hard. This class is not designed to transmit facts, and facts are what you need to do this kind of nitty gritty synthesis question.

(a) $\text{H}_3\text{O}^+/\text{H}_2\text{O}$

(h) Product (f) treated with $(\text{CH}_3)_3\text{CO}^-$

(b) 1. $\text{Hg}(\text{OAc})_2/\text{H}_2\text{O}$

(i) CF_3COOOH

2. $\text{NaBH}_4/\text{H}_2\text{O}/\text{HO}^-$

(j) $\text{CH}_2\text{N}_2/\text{light}$

(c) 1. B_2H_6

2. HO^-/HOOH

(d) product (a) treated with H_3O^+

(e) $\text{H}_2/\text{Pd/C}$

(f) Product (c) treated with HBr

(g) 1. O_3

2. HOOH