Fall 2008 Homework #4

due: 10 a.m. Mon. Oct 6th

1. (10 points) Label each pair as "diastereomers", "enantiomers", or "same".

2. (10 points) Draw the structure of **B**, and explain why it was formed.

Br 
$$OH$$
  $pKa = 2.66$ 

Br  $OH$   $pKa = 2.66$ 

Br  $OH$   $pKa > 4$ 
 $OH$   $pKa > 4$ 
 $OH$   $pH = 2.8$ 

At this pH, only the fluoroacetic acid would be ionized, so that would be the nucleophile. The primary bromide is less congested and so more reactive than the secondary bromide.

3. (10 points) Draw an arrow-pushing mechanism for the following transformation.