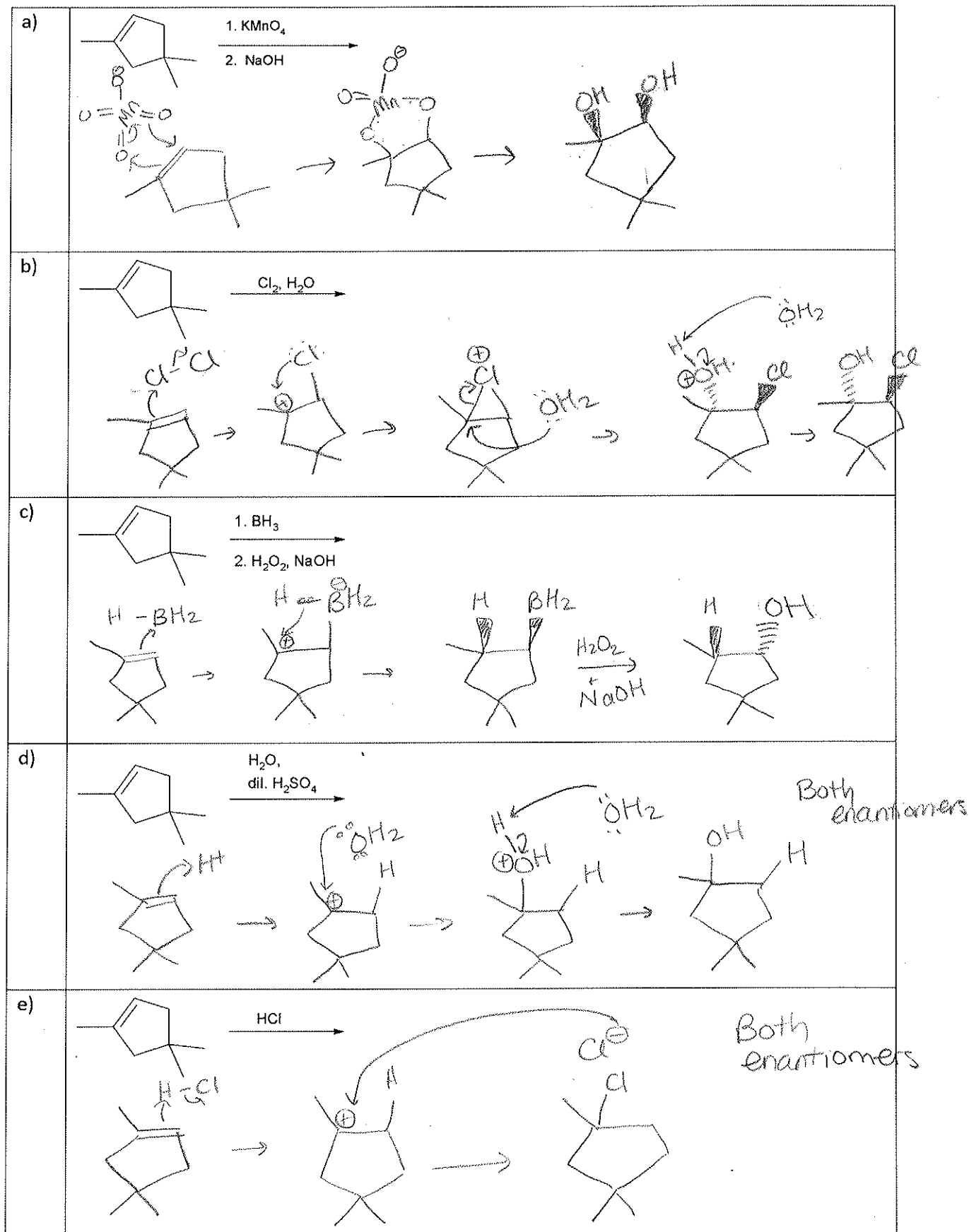
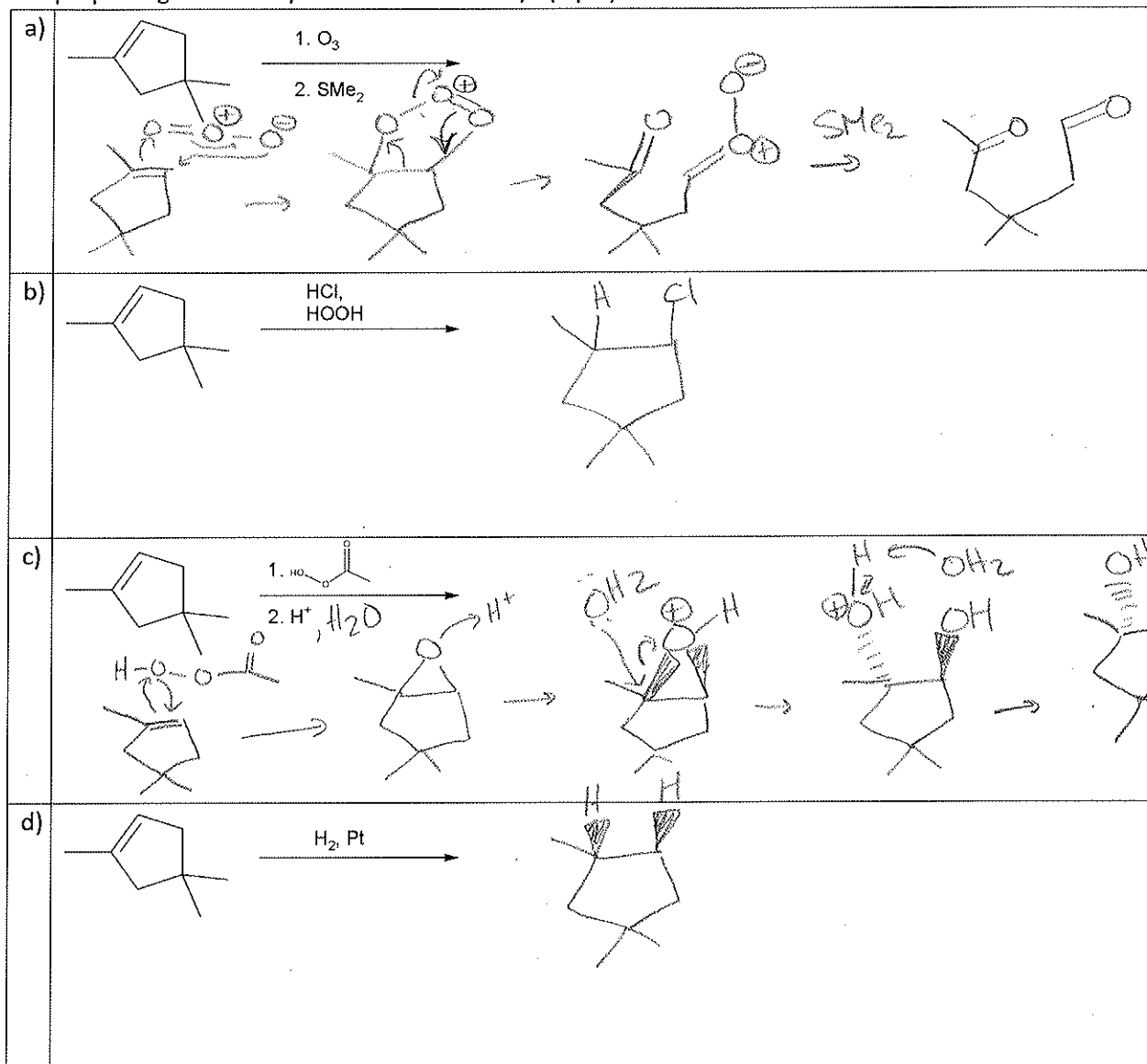


1. For the following reactions, draw a mechanism and predict the product. Be sure to account for regiochemistry, stereochemistry, and any rearrangements in the mechanism. (20 pts)

____/30



2. For the following reactions, predict the products (no mechanism). Make sure you include the proper regiochemistry and stereochemistry. (4 pts)



3. Fill in the boxes below. All reagents are in the box. (6 pts)

HBr	HBr, HOOH	H ₂ O, dil. H ₂ SO ₄	H ₂ , Pt	Br ₂ , H ₂ O	Br ₂
1. Hg(OAc) ₂ , H ₂ O 2. NaBH ₄	1. BH ₃ 2. H ₂ O ₂ , NaOH	1. CH ₃ CO ₃ H 2. H ⁺	1. OsO ₄ 2. NaHSO ₃ /H ₂ O	1. O ₃ 2. SMe ₂	1. KMnO ₄ , 2. NaOH

