1. In reaction with potassium tert-butoxide, the compound below is found to produce two products from E2 elimination, one major and one minor.

![Reaction Scheme](image)

a. Provide structures for the two products, indicate which is the major product, and state why it is the major product. (2 points)

b. Provide a mechanism, using curved arrow notation that shows formation of the major product. (2 points)

2. Show the elimination products of these reactions. When more than one product is possible, indicate which is the major product. (4 points)

![Reaction Schemes](image)

3. Predict the products below (could be products from substitution, elimination, or both). If multiple products are expected, state which is major. (2 points)

![Reaction Schemes](image)