1. Circle the major product for the following **E1 reaction**. (1 point)

2. Circle the major product for the following $S_N 2$ reaction. (1 point)

- 3. a. Predict the major **E2 elimination** product for the following reaction. Use a Newman projection to rationalize the alkene geometry.
 - b. Provide an arrow pushing mechanism to account for your predicted product. (4 points)

4. Provide mechanism for the following S_N1 reaction. (4 points)