



Problems:

- Provide structures for compounds **2**, **6**, and **9**.
- Provide reasonable conditions for the following transformations: **3-4** and **7-8**.
- Provide a reaction mechanism for the transformation from **2** to **3**.
- Provide a reaction mechanism for the transformation from **4** to **5**.
- Provide the name of the named reaction and reaction mechanism for the transformation from **6** to **7**.
- Provide a reaction mechanism for the first step in the transformation from **9** to **10**.
- Provide the structure of the named reagent in step 1 in the transformation from **10** to **(-)-kopsinine**.
- Provide a reaction mechanism for the first step of the transformation from **10** to **(-)-kopsinine**.