1. Propose syntheses of the targets below. All carbons must come from the starting materials provided, you can use any reagent you wish. YOU CAN IGNORE STEREOCHEMISTRY.

### Target A.

![Target A](image)

### Target B.

![Target B](image)
2. Propose syntheses of the targets below. 

**All carbons** must come from the starting materials provided, you can use any reagent you wish.

### Starting Materials:

![Starting Materials Diagram]

#### Target A.

![Target A Structure]

#### Target B.

![Target B Structure]
3. Match the names of the functional groups with labeled examples from the natural products and medicines.

- lactone
- ether
- hemiacetal
- cyanohydrin
- acetal
- aldehyde
- amide
- anhydride