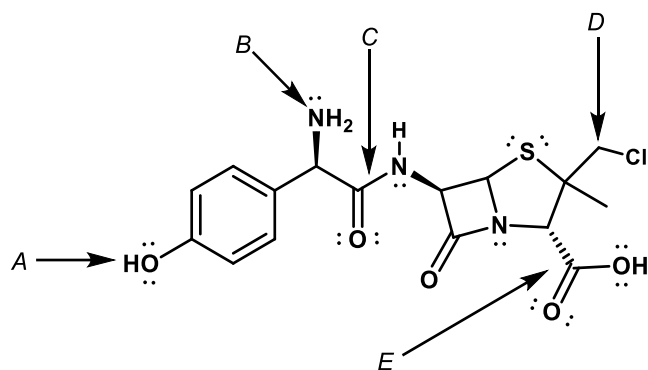


1. The molecule below is a derivative of amoxicillin. Identify the functional groups indicated by the letters and arrows.



A

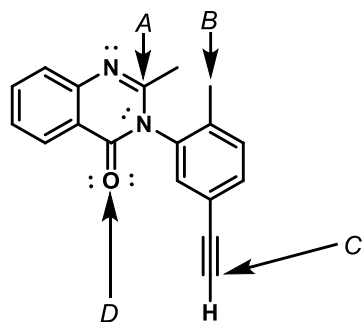
B

C

D

E

2. For each of the selected atoms below, provide the hybridization and expected electron geometry.



Methaqualone (Quaalude)

Hybridization

Geometry

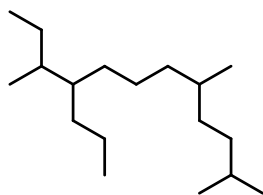
A

B

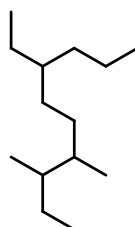
C

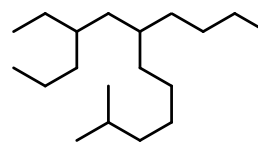
D

3. For the hydrocarbons given below, circle the **parent chain** and give the appropriate name for that chain. Then, give the names of each substituent attached to the parent chain.



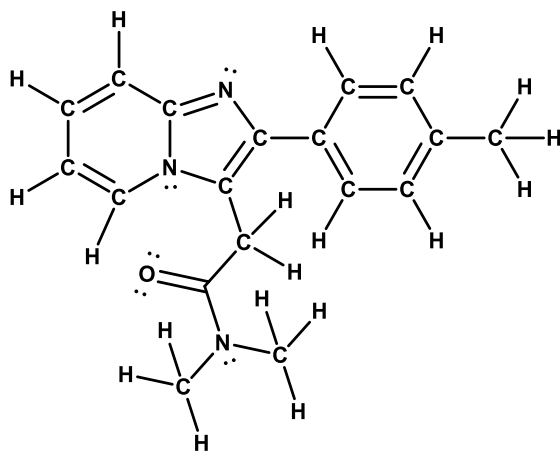
Parent
chain:





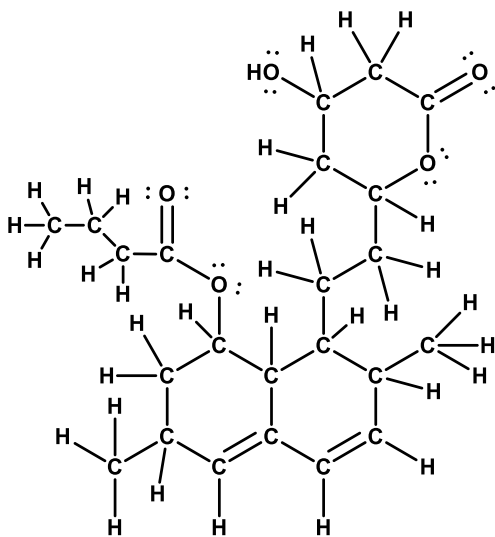
substituents:

4. Below are two of the most common drug molecules on the market: Ambien (insomnia) and Simvastatin (high cholesterol). Large, complex molecules such as these are not easy to write in Lewis structure format. Translate the following molecules into the correct bond line formula.



Zolpidem (Ambien)

Bond-line Structure



Simvastatin

Bond-line Structure