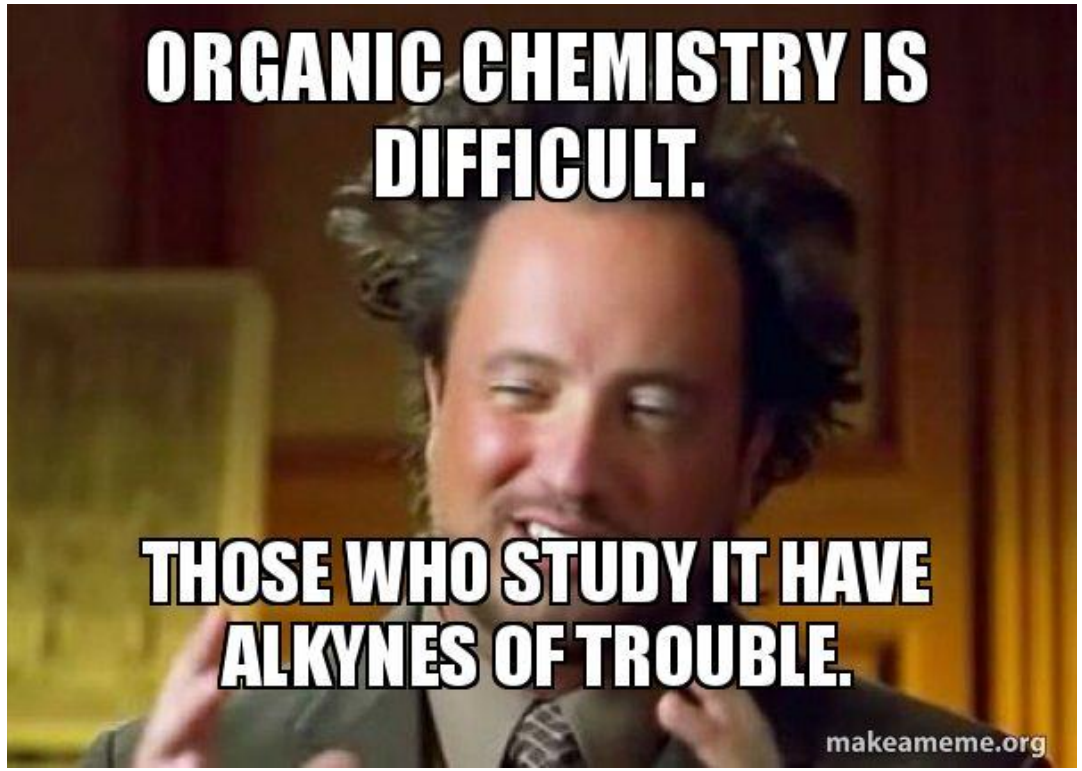
Nov 4-8 Practice Problems

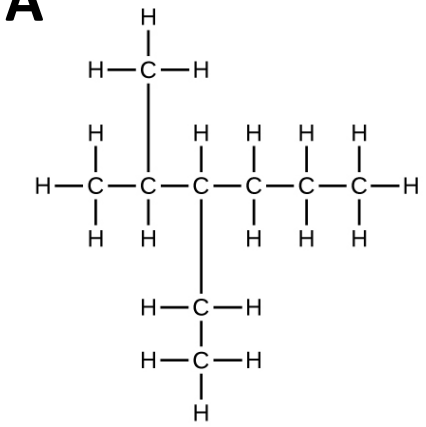


Due dates:

- I know nothing about your midterm!
- Review 6 is this week (but we cannot answer questions about midterm); please attend Dr. Sirjoosingh and Prof. Kakkar office hours

Q1: Draw the following expanded (Kekule) or condensed structures as skeletal diagrams

A

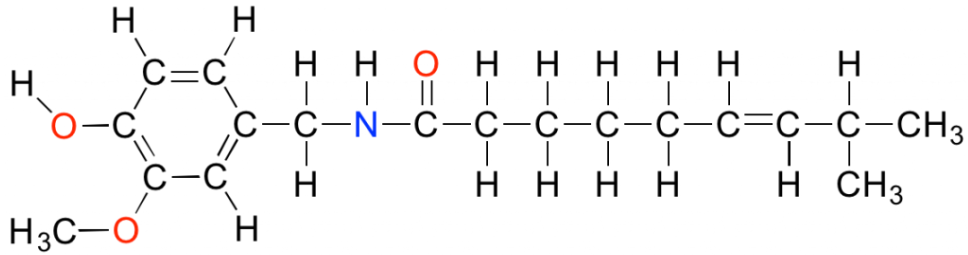


B

$CH_3CH_2CH_2CH_2CH_2CH_2CH_3$

Note that this was not the ideal condensed structure. The completely corrected condensed structure would be $CH_3(CH_2)_5CH_3$

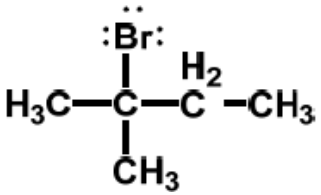
C



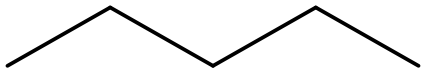
capsaicin

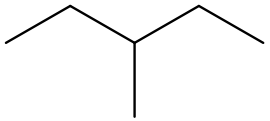
Q2: Draw the following structures as described

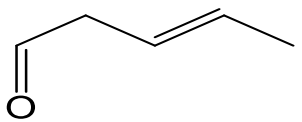
As skeletal structures



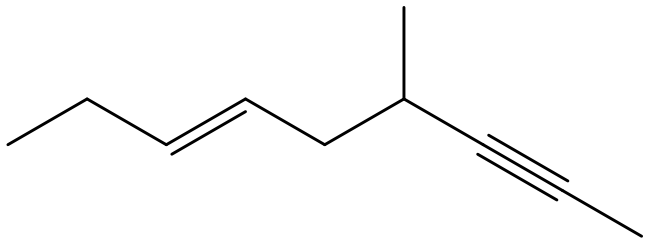
As expanded structures



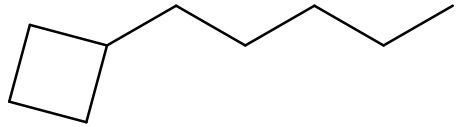


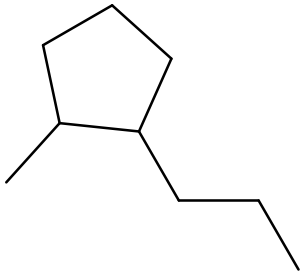


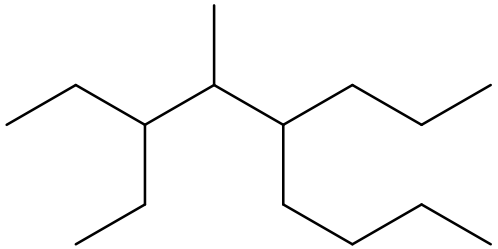
Q3: Provide the correct name for the following

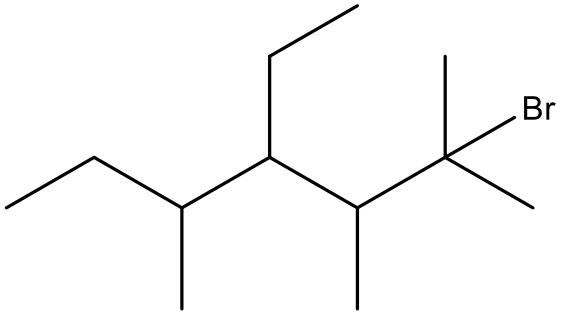


$CH_2=CH-CH_2-CH=CH_2$









Q4: Draw the following molecules

3-ethylcyclobutene

1,2,3,4-tetramethylcyclobuta-1,3-diene

2-pentene (or pent-2-ene)

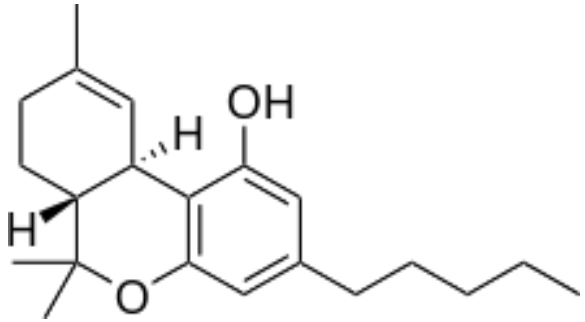
methylcyclopropane

5-fluoro-4,5-dimethylhex-1-ene

3-ethyl-4-methylhexane

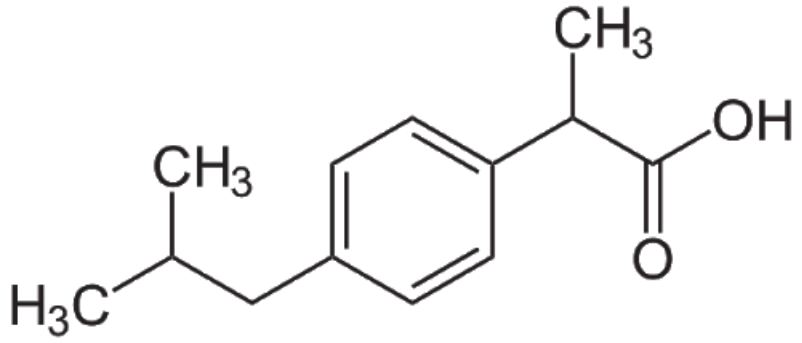
1,3-hexdien-5-yne

Q5: Calculate the units of unsaturation in the following molecules



THC

C_7H_{12}



Ibuprofen (Advil)

Q6: Draw the structure of a cycloalkene with 6 carbons (1 double bond). Determine the chemical formula. How many degrees of unsaturation?

Q7: Identify these aromatic molecules using IUPAC. Indicate if the substituents are meta, ortho, or para to each other