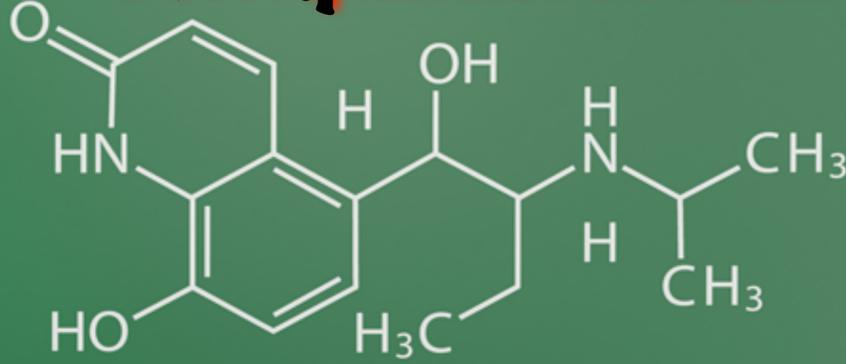
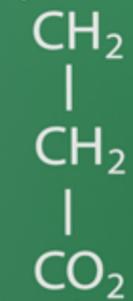


alexquimica.com



Cadeias Carbônicas



acesse o canal

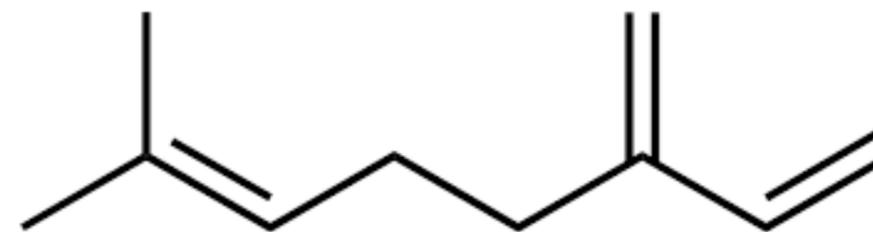
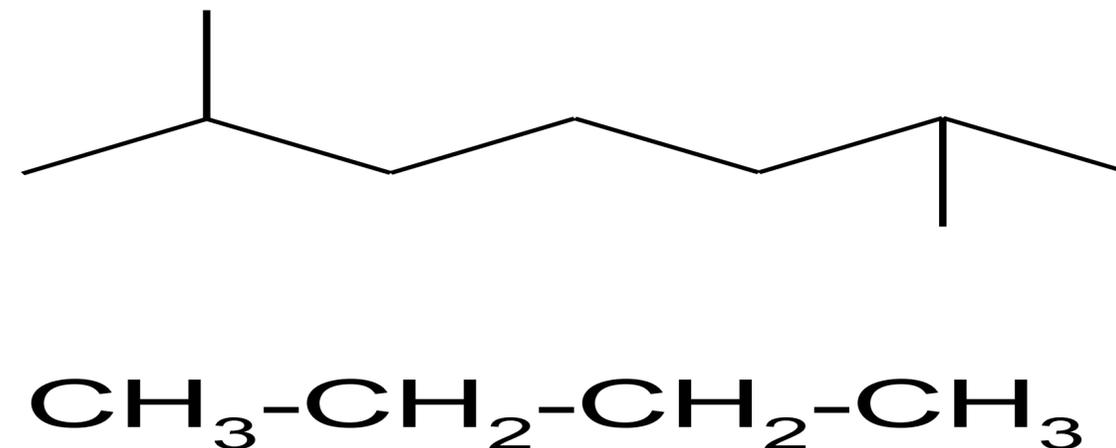
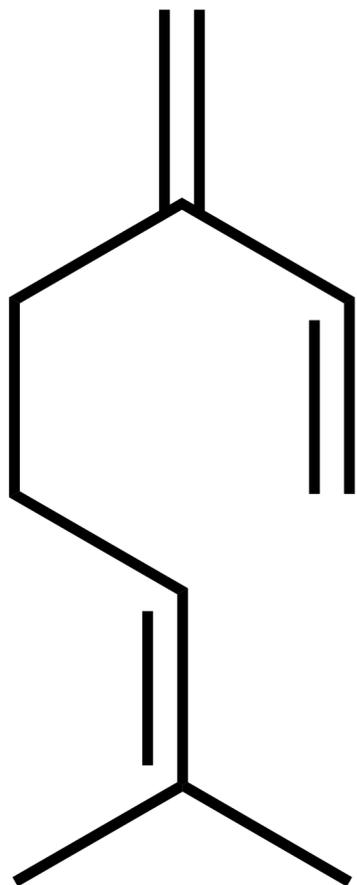
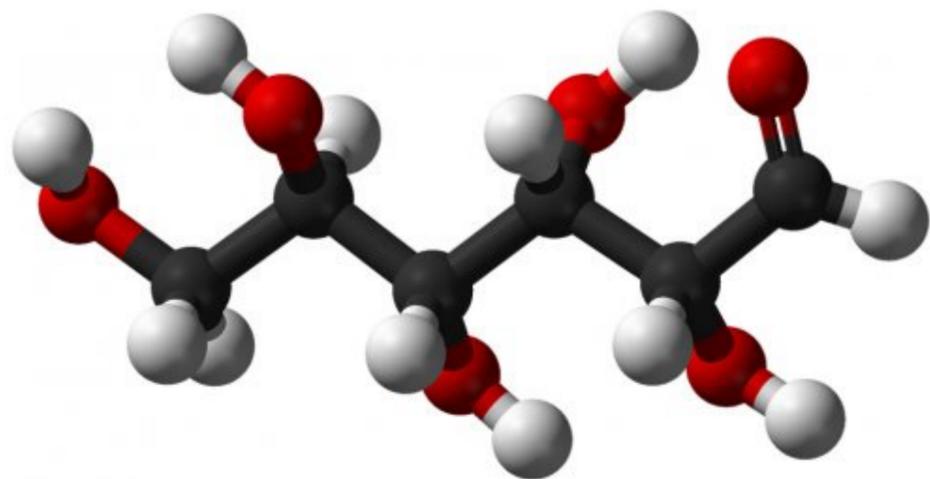
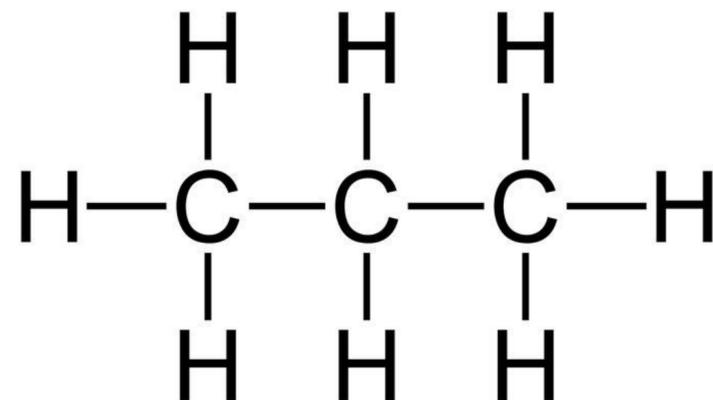


Prof: Alex

QUANTO À PRESENÇA DE EXTREMIDADES

Cadeias abertas, acíclicas ou alifáticas

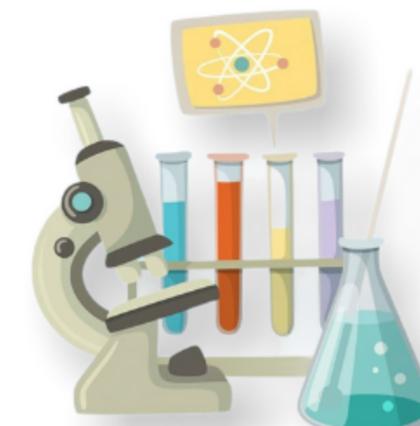
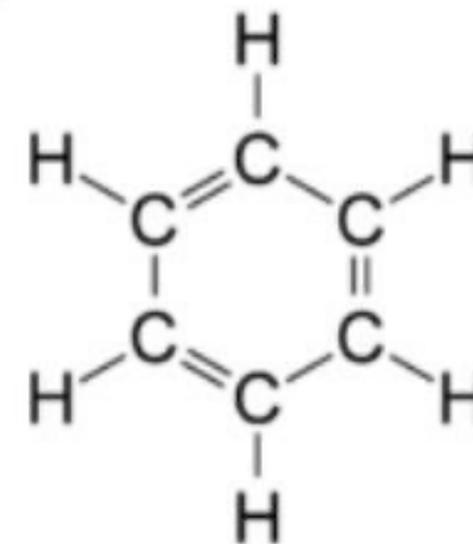
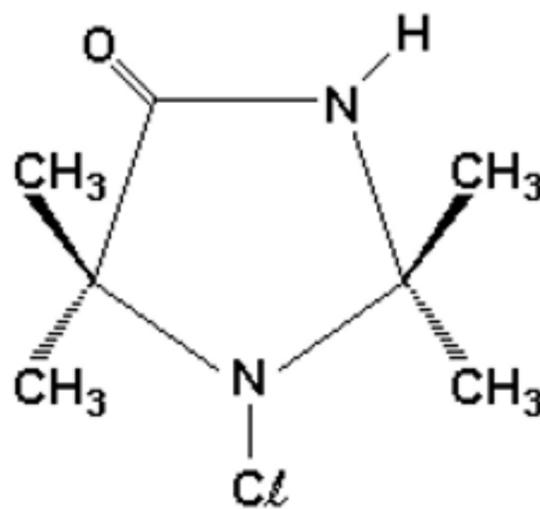
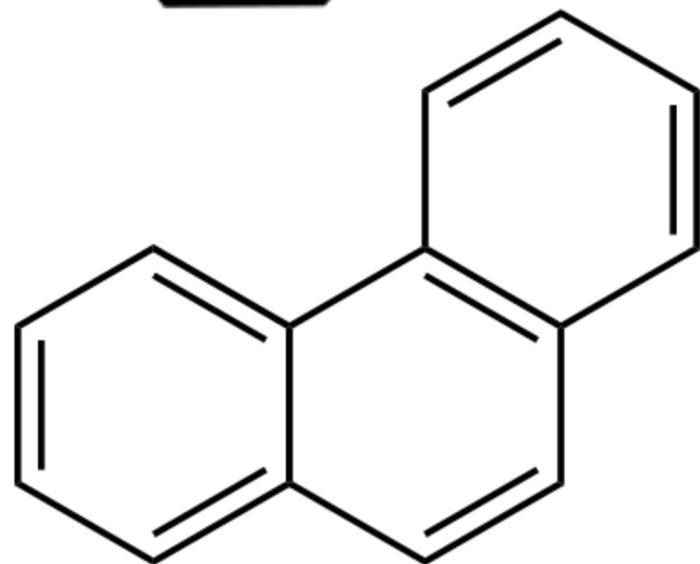
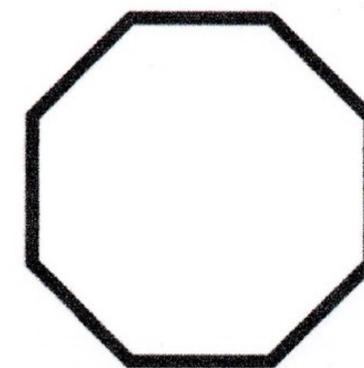
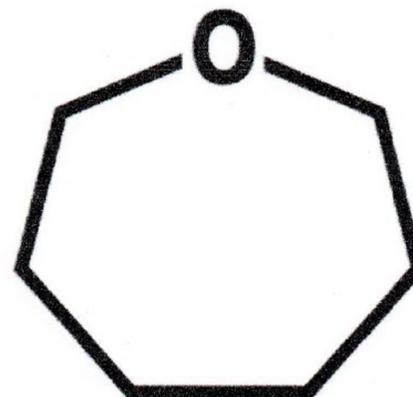
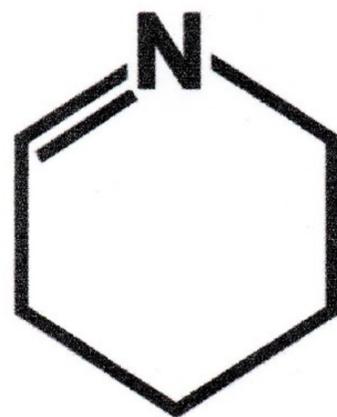
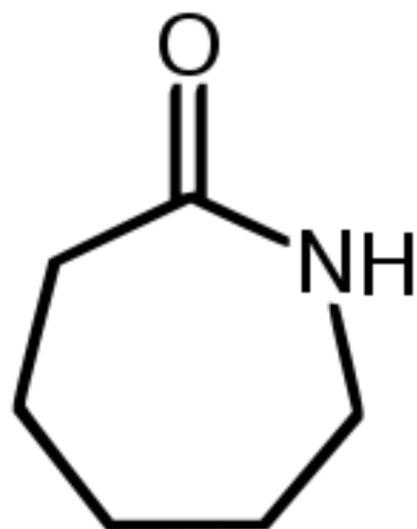
Apresentam extremidades.



QUANTO À PRESENÇA DE EXTREMIDADES

CADEIAS FECHADAS OU CÍCLICAS

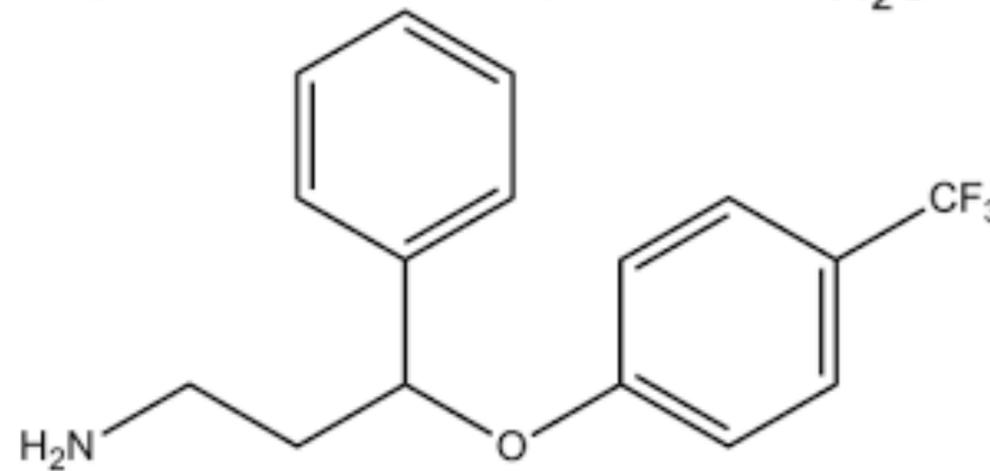
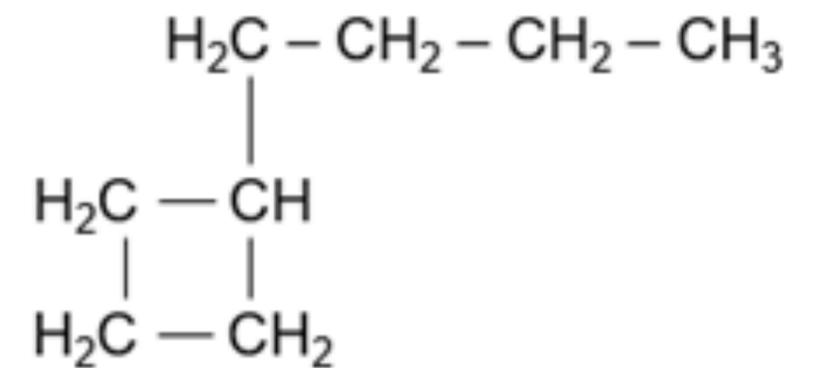
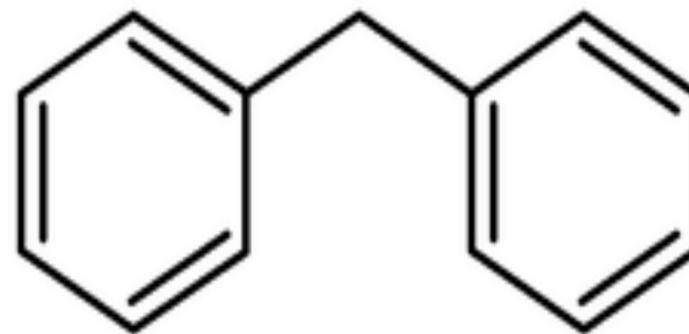
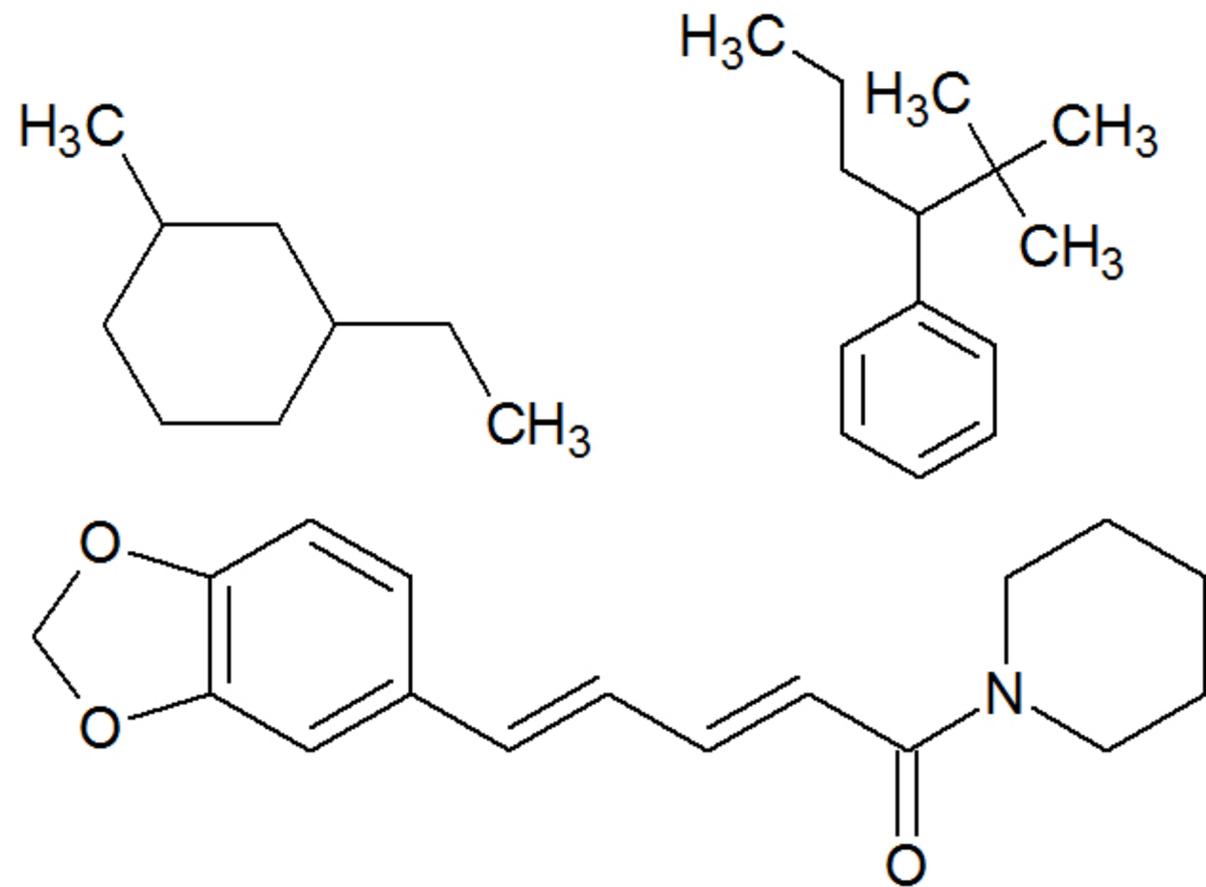
Formam ciclos ou anéis de átomos.



QUANTO À PRESENÇA DE EXTREMIDADES

CADEIAS MISTAS

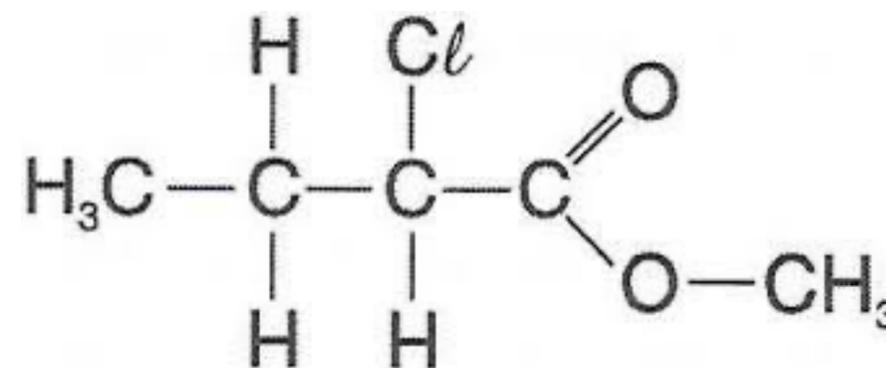
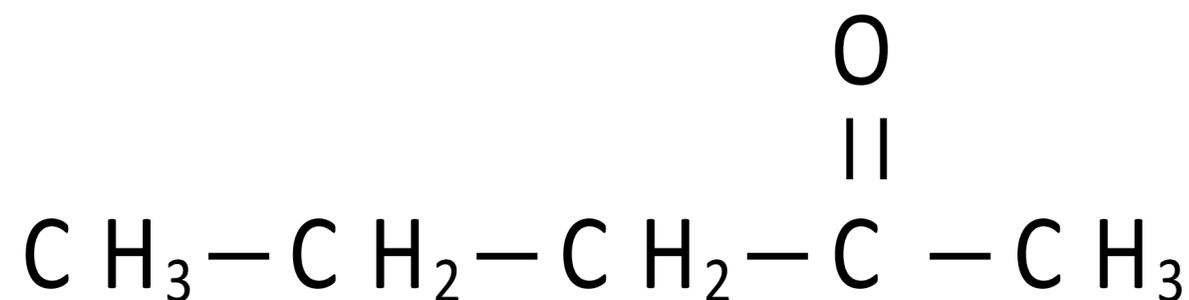
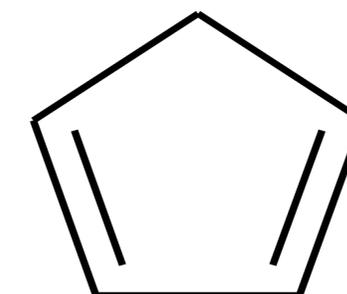
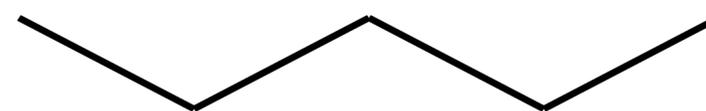
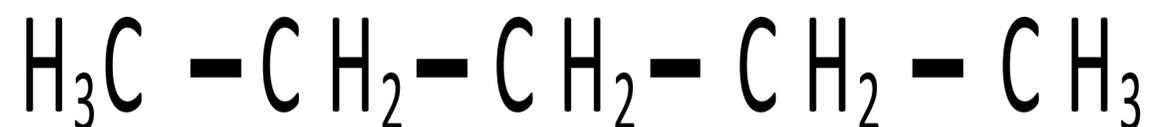
Possuem uma parte aberta (alifática ou acíclica) e outra fechada (cíclica).



QUANTO A DISPOSIÇÃO DOS ÁTOMOS DE CARBONO

CADEIA NORMAL, RETA OU LINEAR

Apresenta somente uma sequência de átomos de carbono ou apenas duas extremidades carbônicas.

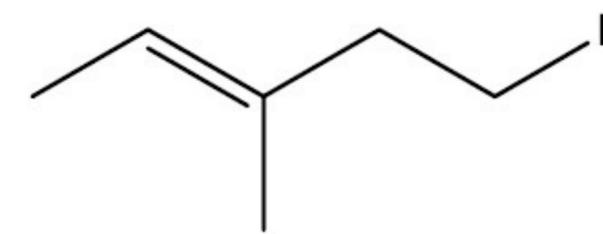
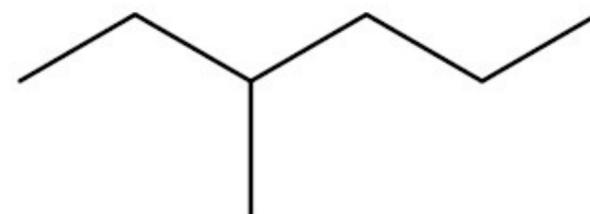
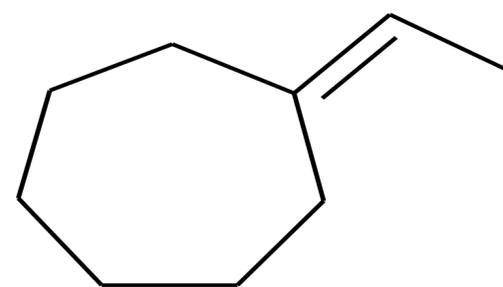
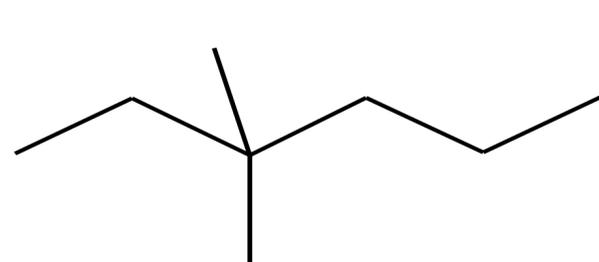


QUANTO A DISPOSIÇÃO DOS ÁTOMOS DE CARBONO

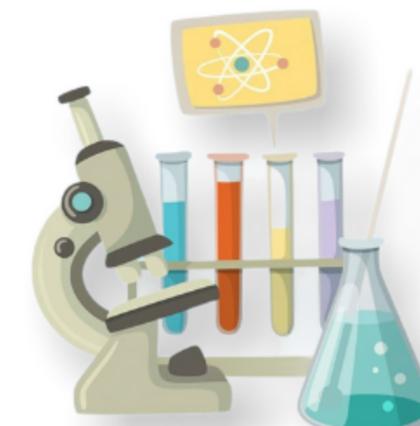
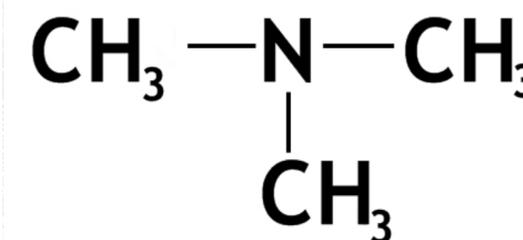
Cadeia Ramificada

Possui na sua estrutura carbonos terciários e/ou quaternários.

Os átomos de carbono estão em mais de um encadeamento.



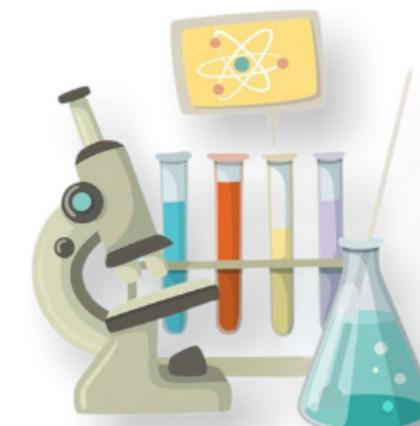
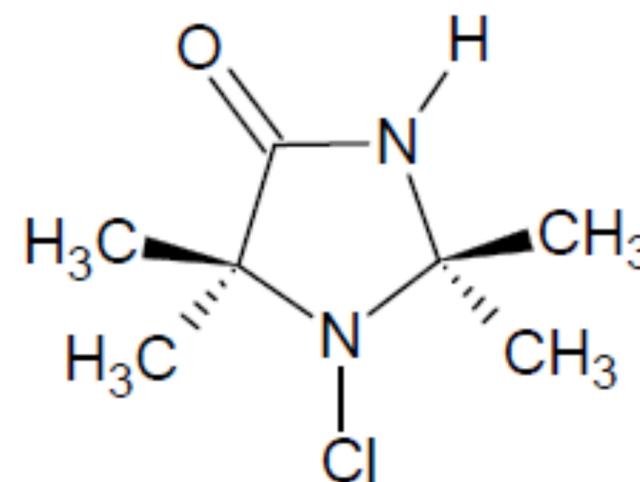
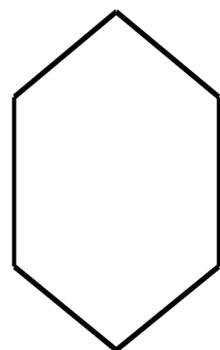
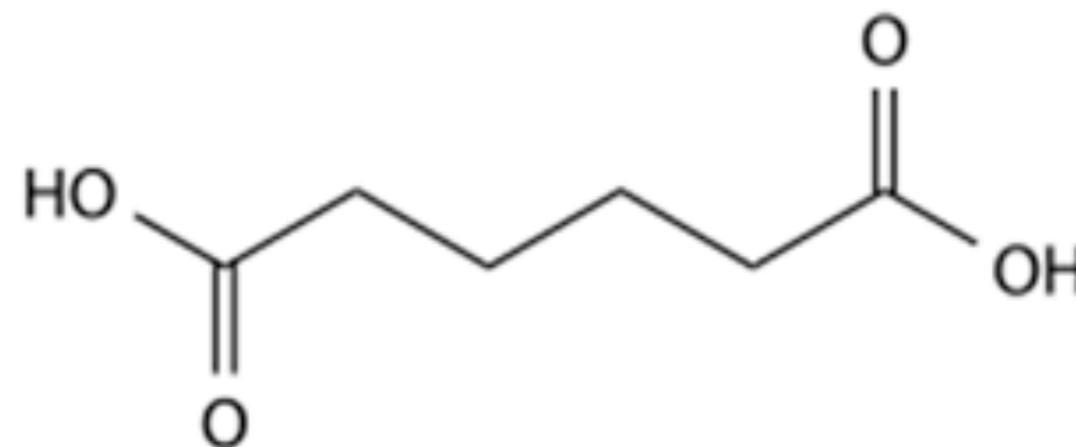
Cuidado: Existem compostos que não apresentam C terciários ou quaternários, mas apresentam três extremidades carbônicas.



QUANTO À NATUREZA DAS LIGAÇÕES

CADEIA SATURADA

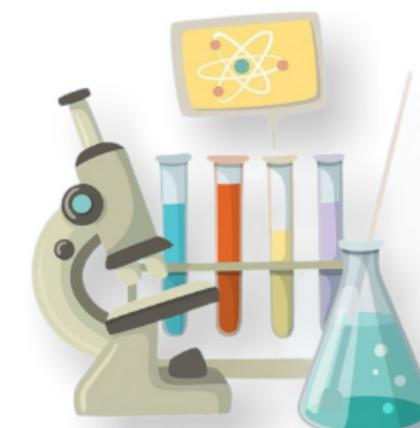
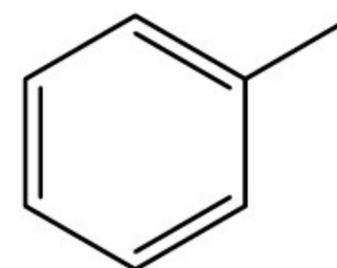
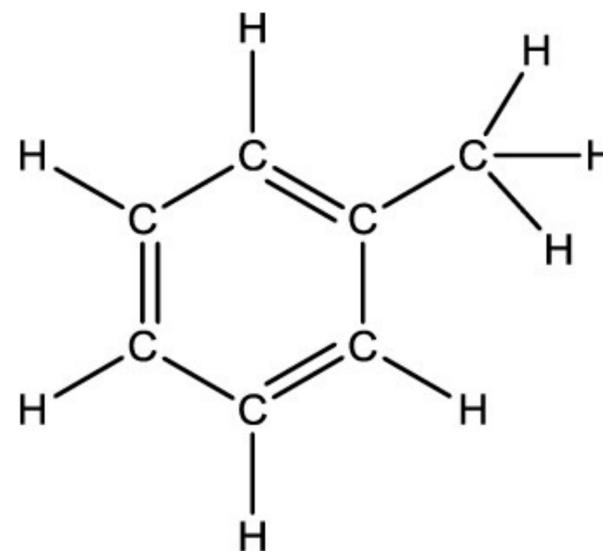
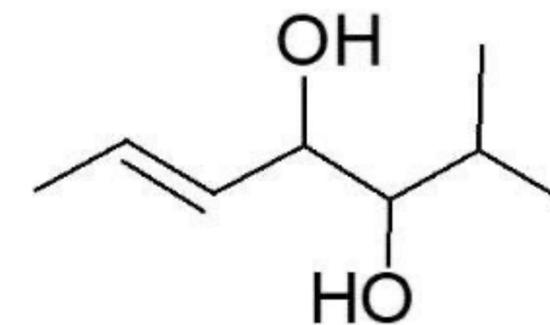
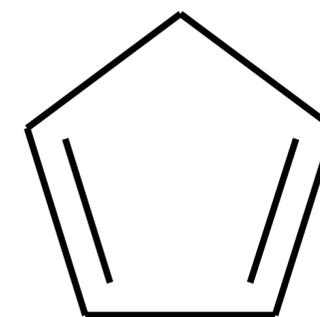
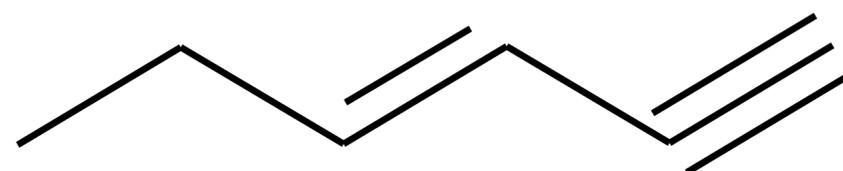
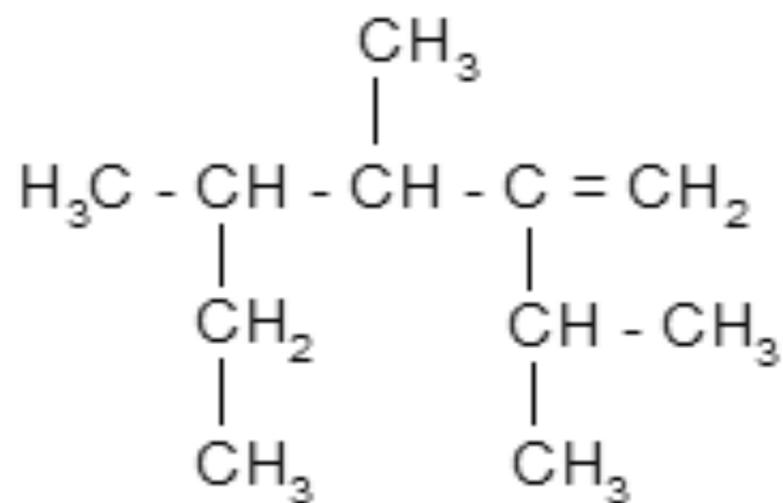
Possui somente ligações simples (sigma) entre átomos de carbono.



QUANTO À NATUREZA DAS LIGAÇÕES

CADEIA INSATURADA

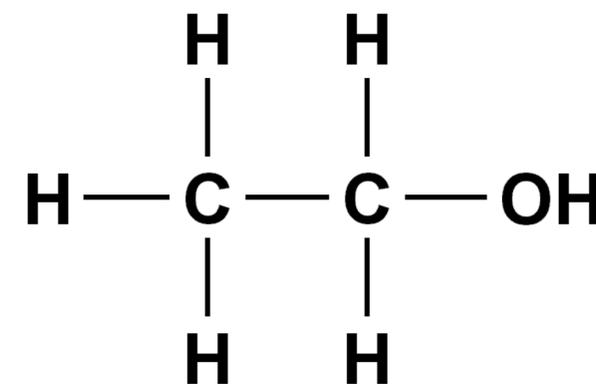
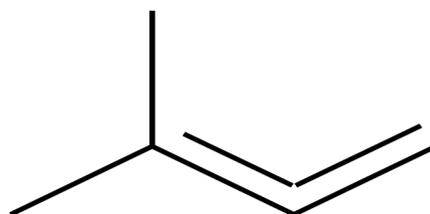
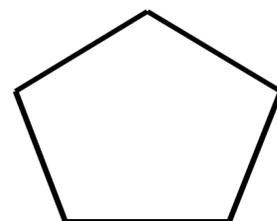
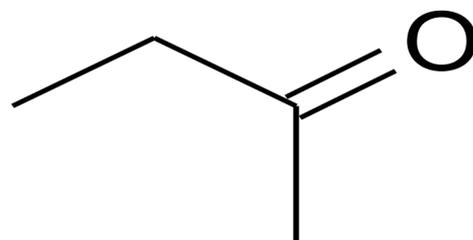
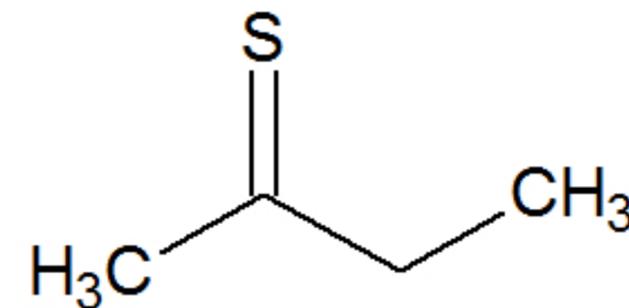
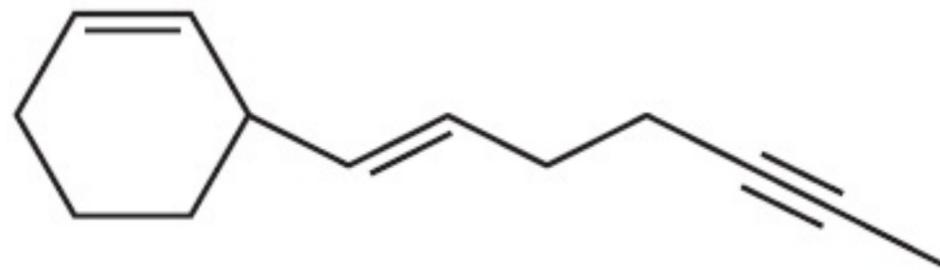
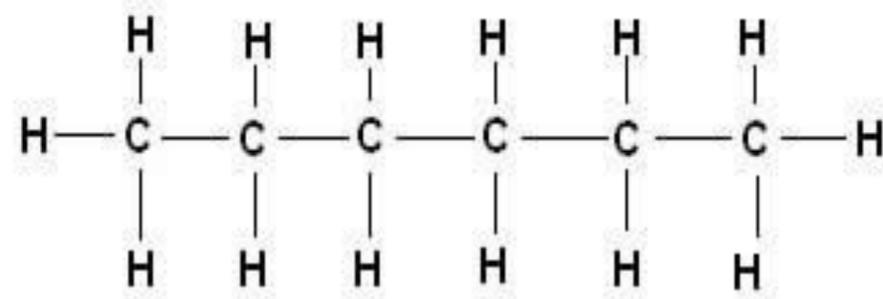
Apresenta insaturações (duplas ou triplas) entre átomos de carbono.



QUANTO À NATUREZA DOS ÁTOMOS

CADEIA HOMOGÊNEA

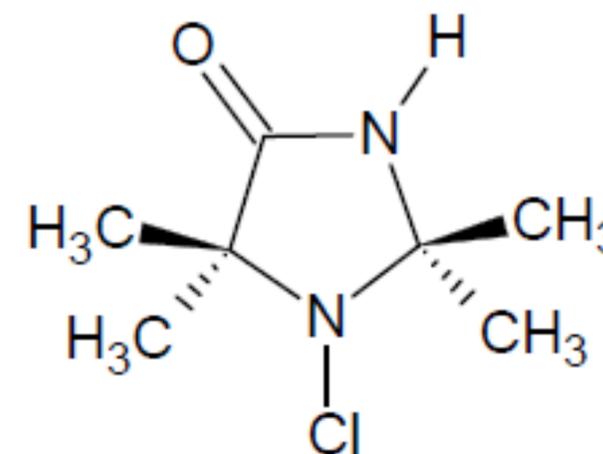
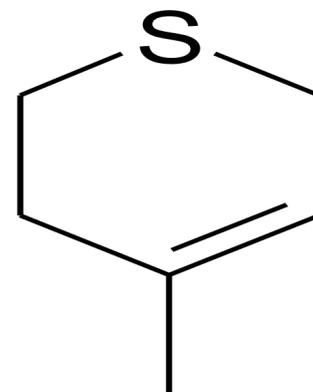
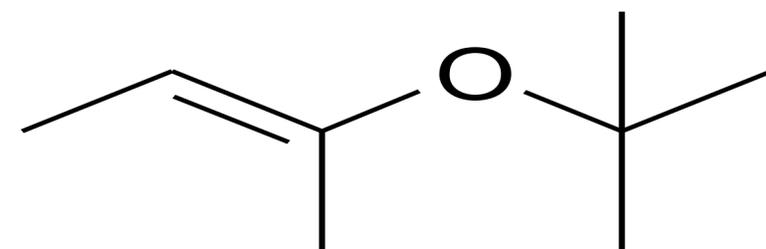
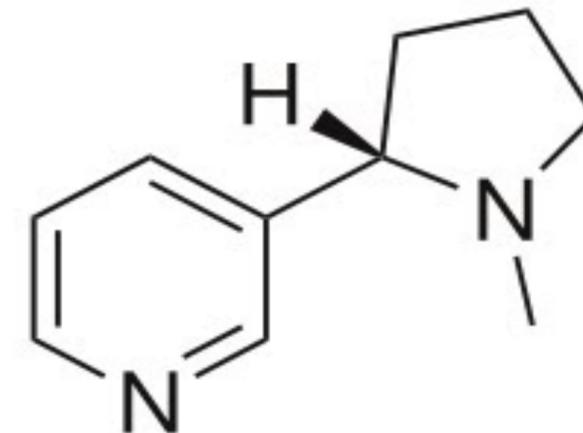
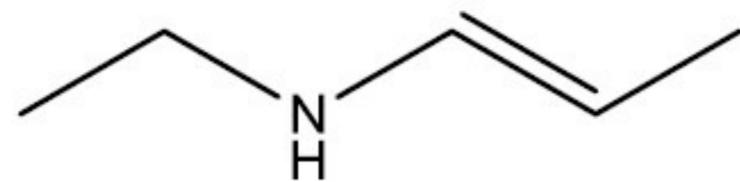
Apresenta somente átomos de "C" entre carbonos



QUANTO À NATUREZA DOS ÁTOMOS

CADEIA HETEROGÊNEA

Apresenta heteroátomo entre carbonos.

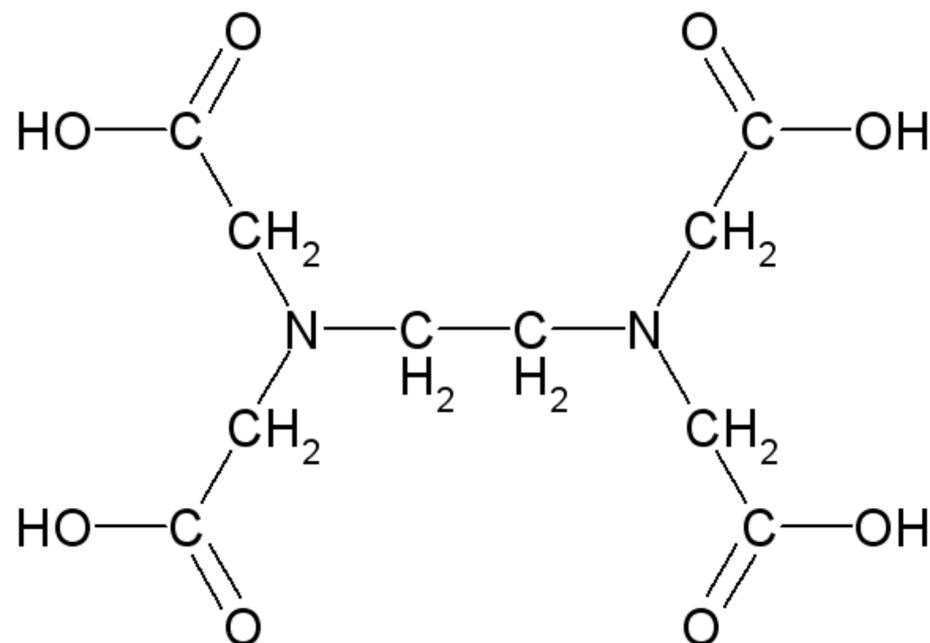


Classificação das Cadeias Carbônicas

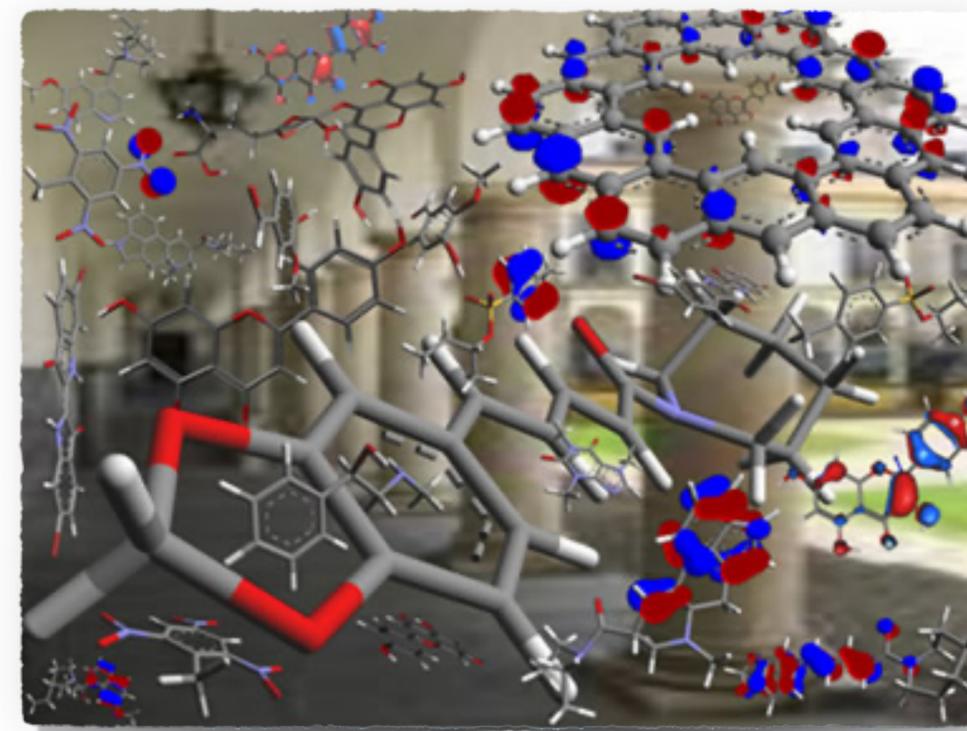
Abertas, Acíclicas ou Alifáticas

- ➔ Normal ou Ramificada
- ➔ Saturada ou Insaturada
- ➔ Homogênea ou Heterogênea

Ex:



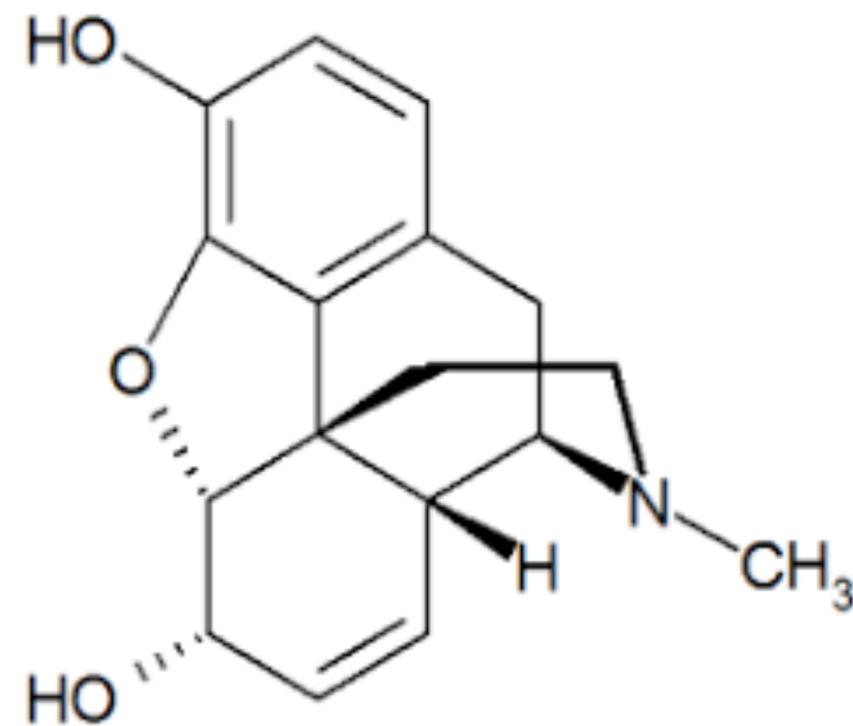
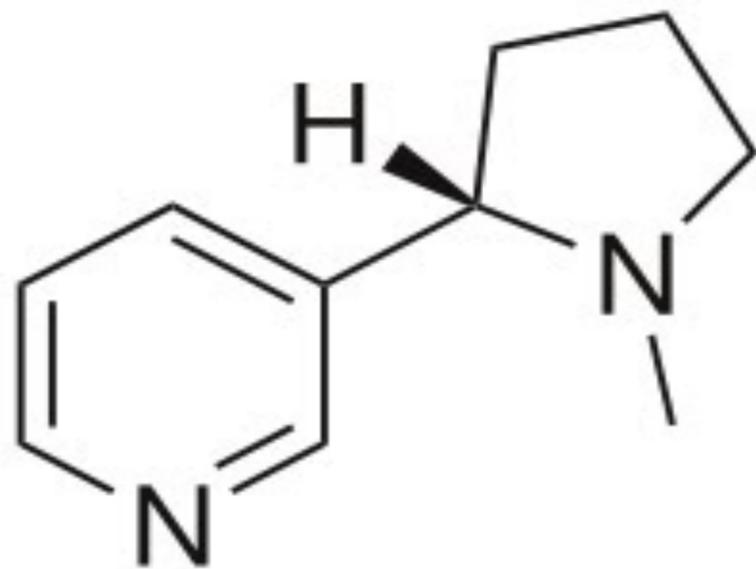
- aberta
- ramificada
- saturada
- heterogênea



CLASSIFICAÇÃO DE CADEIAS CÍCLICAS QUANTO À NATUREZA DOS ÁTOMOS

CADEIAS HETEROCÍCLICAS

São simultaneamente fechadas e heterogêneas

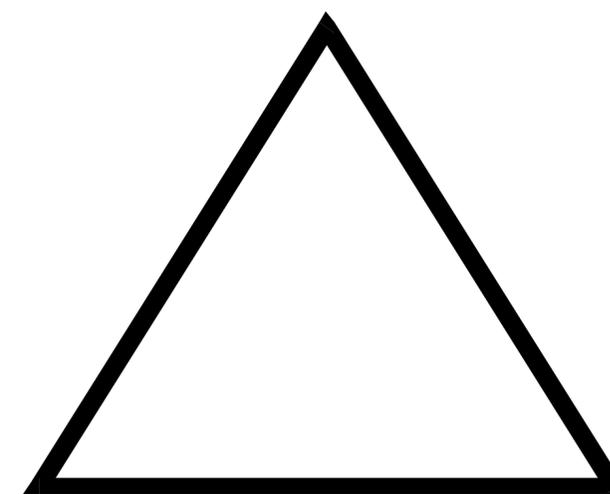
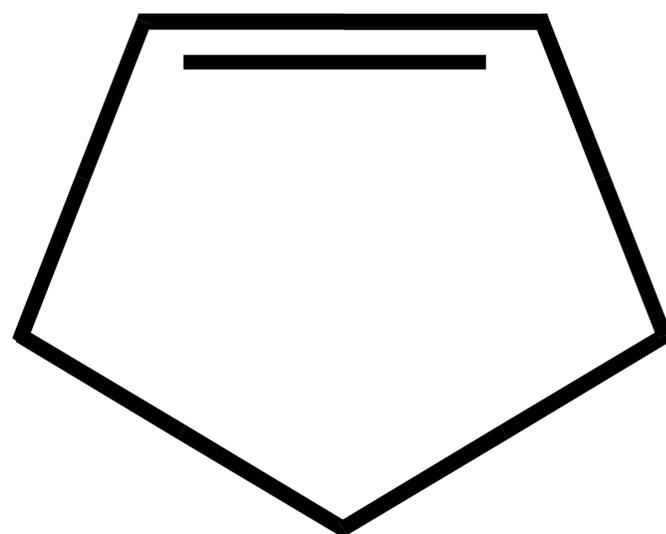
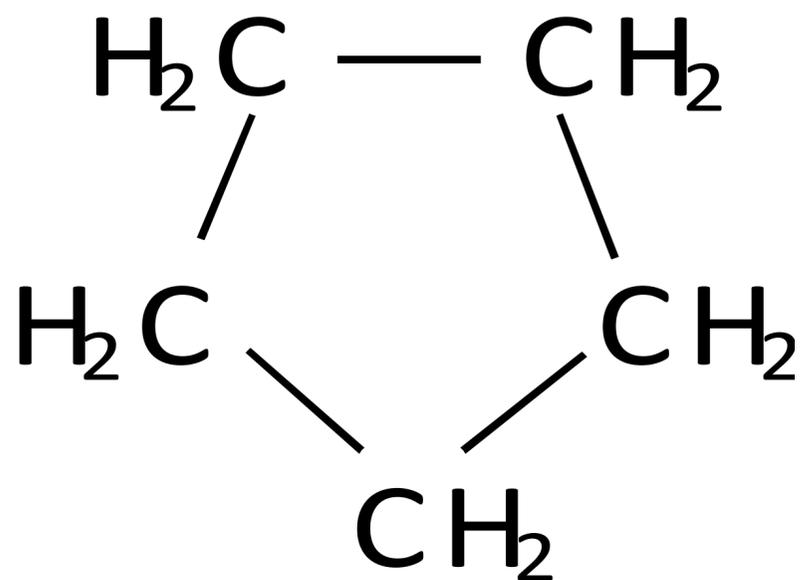


CLASSIFICAÇÃO DE CADEIAS CÍCLICAS

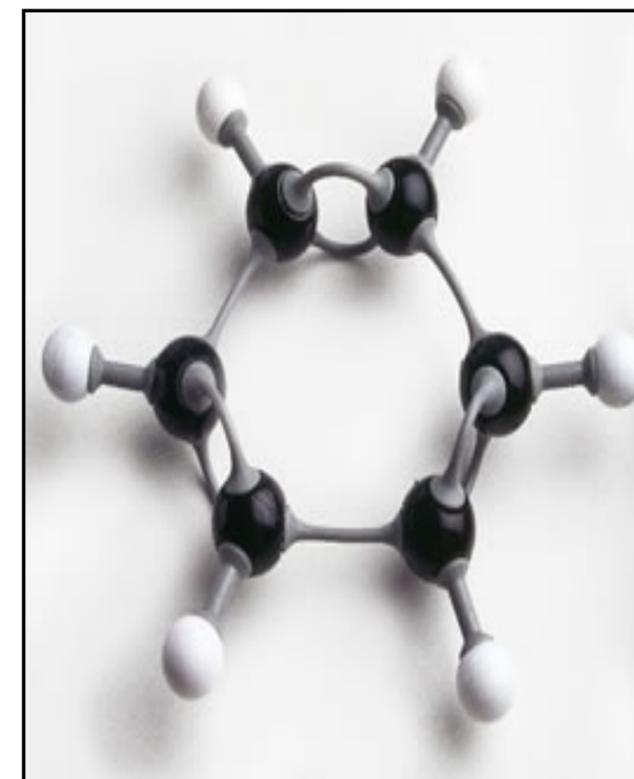
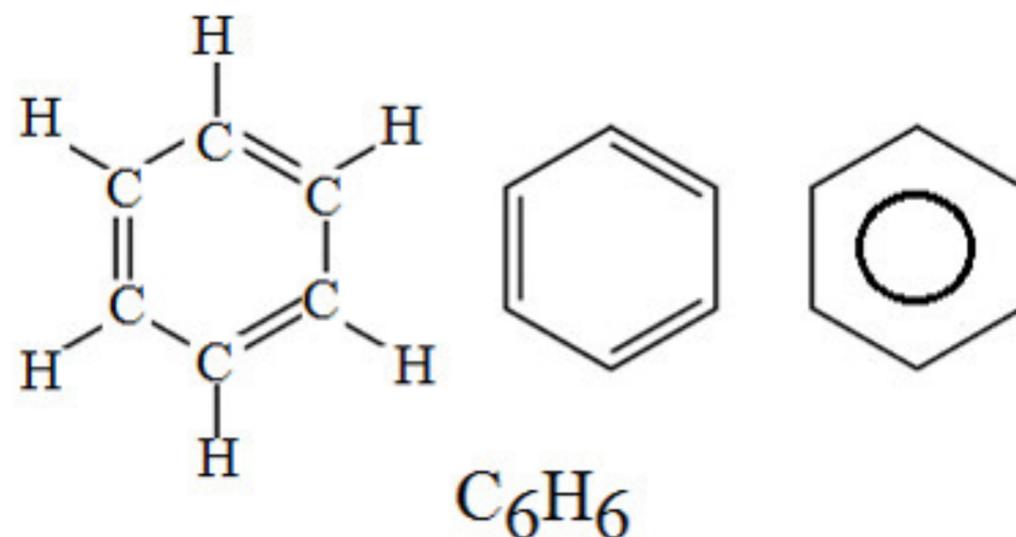
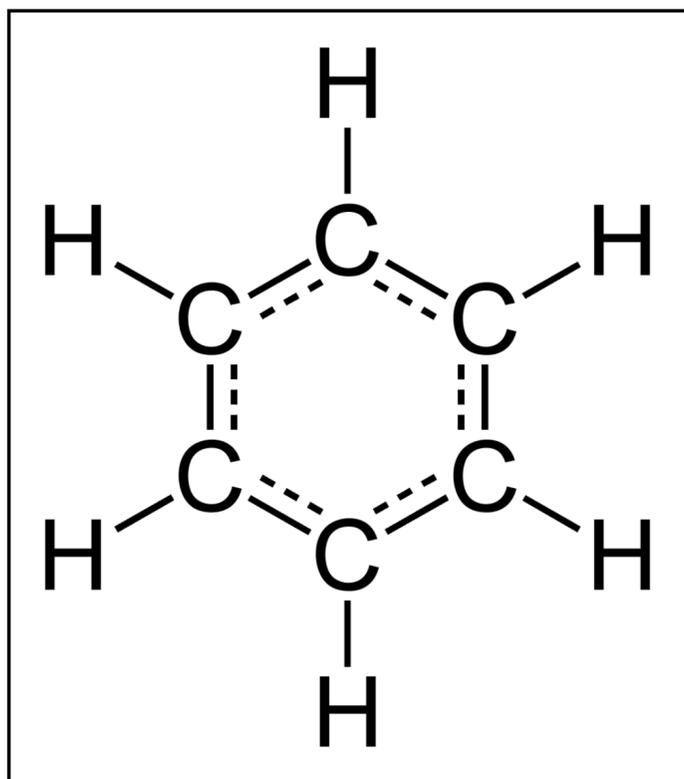
QUANTO À NATUREZA DOS ÁTOMOS

CADEIAS HOMOCÍCLICAS

São simultaneamente fechadas e homogêneas.



Benzeno



- O benzeno possui fórmula molecular C_6H_6 .
- Sua estrutura plana indica um ciclo com seis carbonos e três insaturações alternadas.
- Estes elétrons π estão em movimento, fenômeno denominado de **RESSONÂNCIA**.

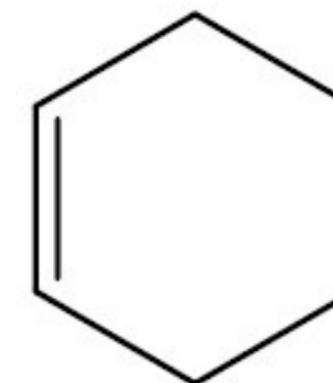
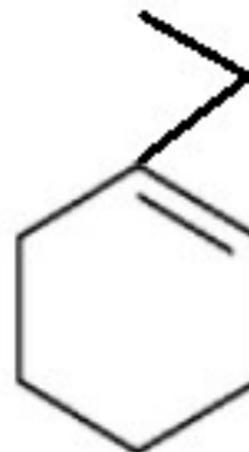
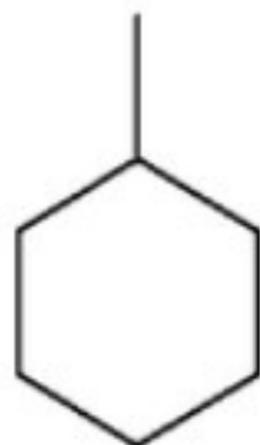
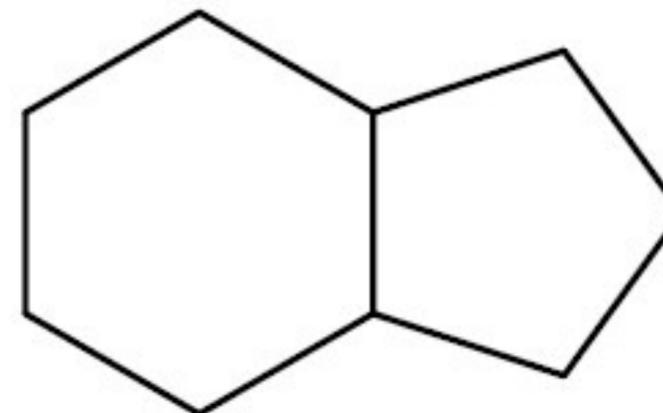
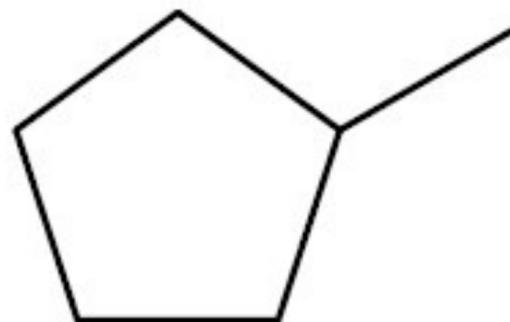
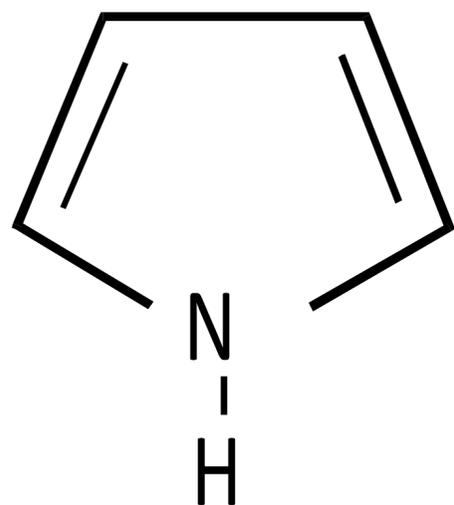


CLASSIFICAÇÃO DE CADEIAS CÍCLICAS

QUANTO À PRESENÇA DO ANEL

CADEIAS ALICÍCLICAS

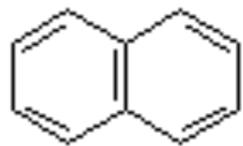
Não possui Núcleo Aromático ou Anel Benzênico.



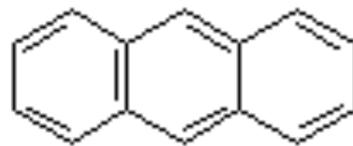
CLASSIFICAÇÃO DE CADEIAS CÍCLICAS QUANTO À PRESENÇA DO ANEL

CADEIAS AROMÁTICAS

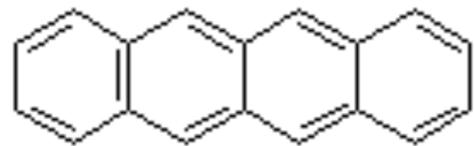
Cadeia que possui Núcleo Aromático ou Anel Benzênico.



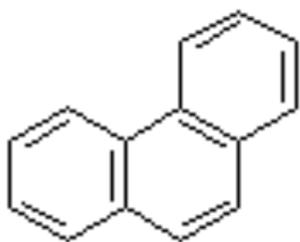
Naftaleno



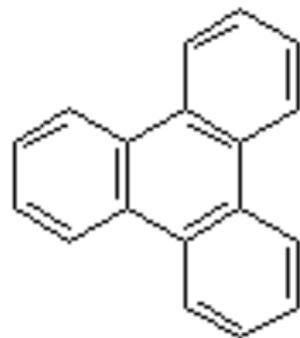
Antraceno



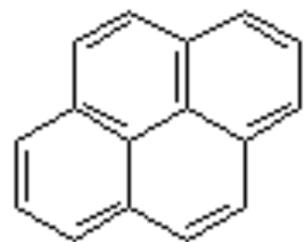
Tatraceno (Naftace



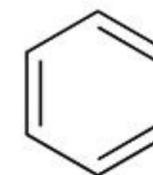
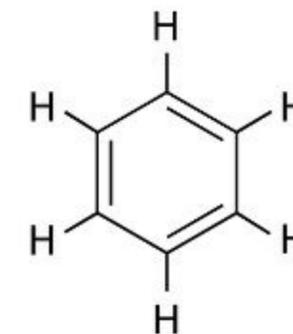
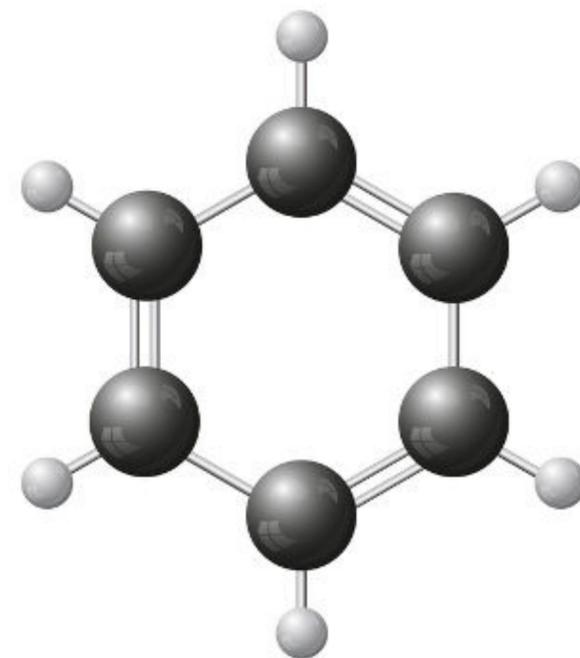
Fenantreno

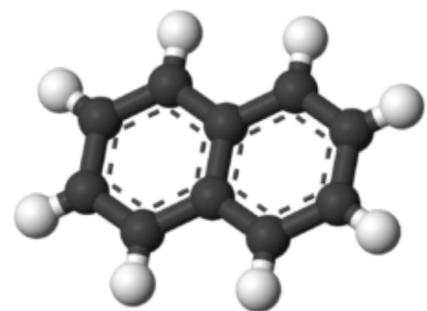


Trifenileno



Pireno

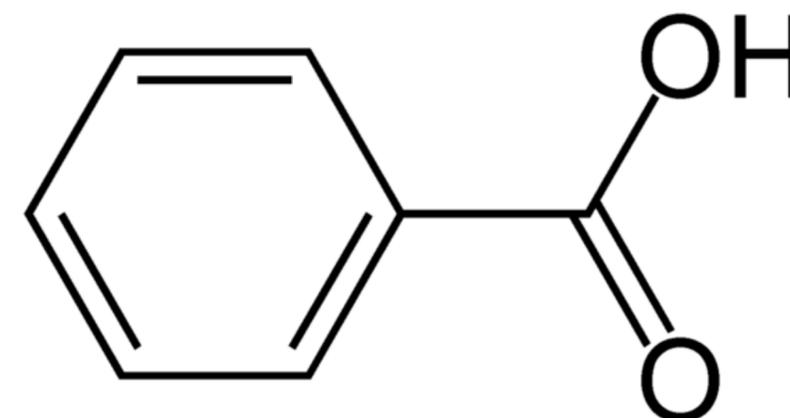
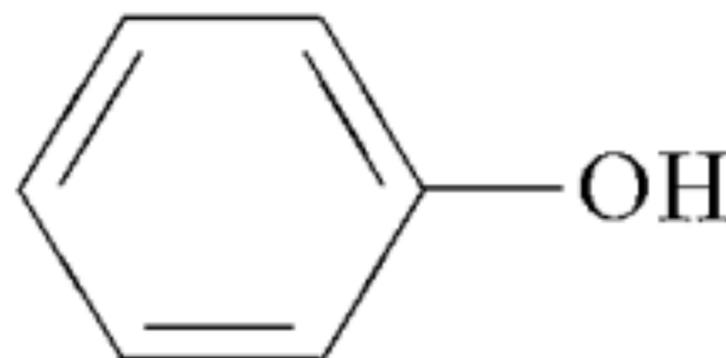
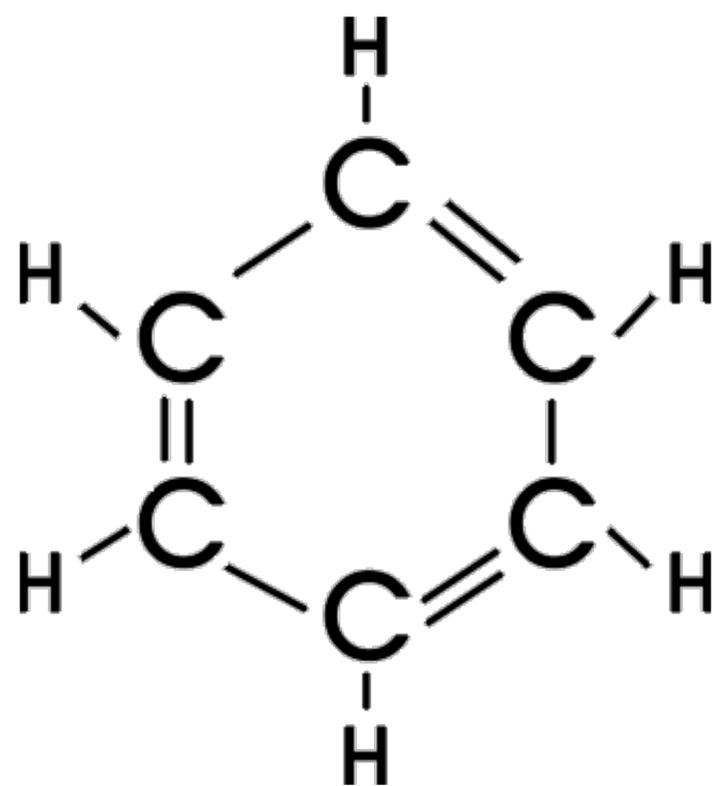


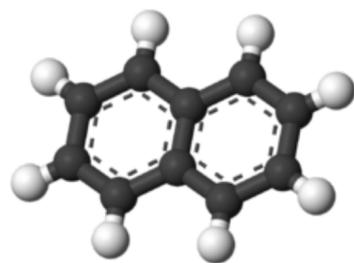


CLASSIFICAÇÃO DE CADEIAS AROMÁTICAS

CADEIA MONONUCLEAR

Cadeia que possui um único núcleo aromático

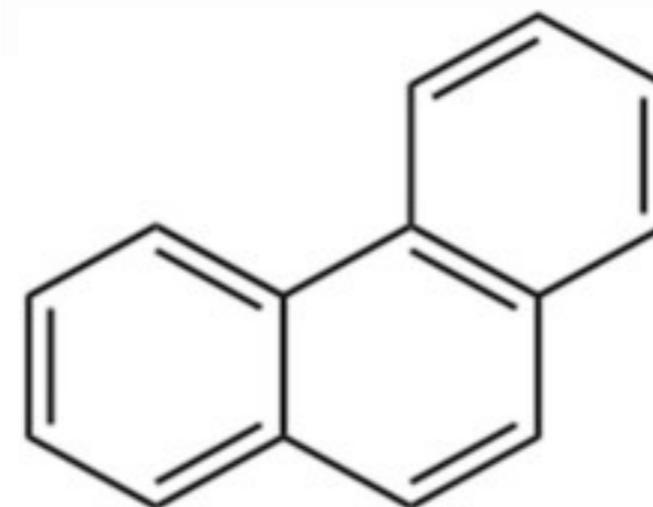
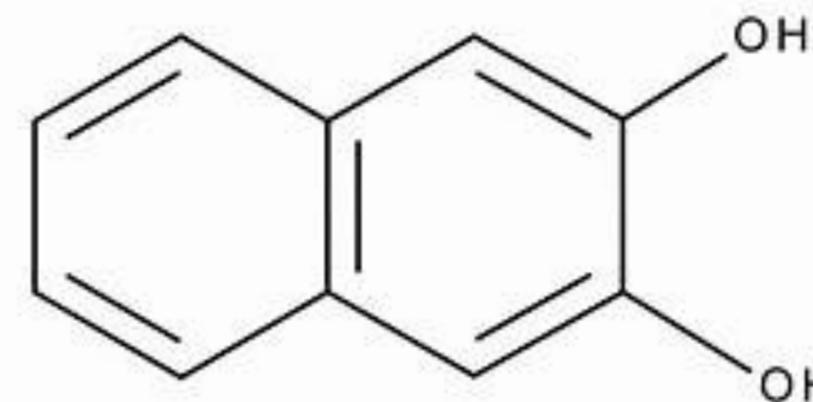
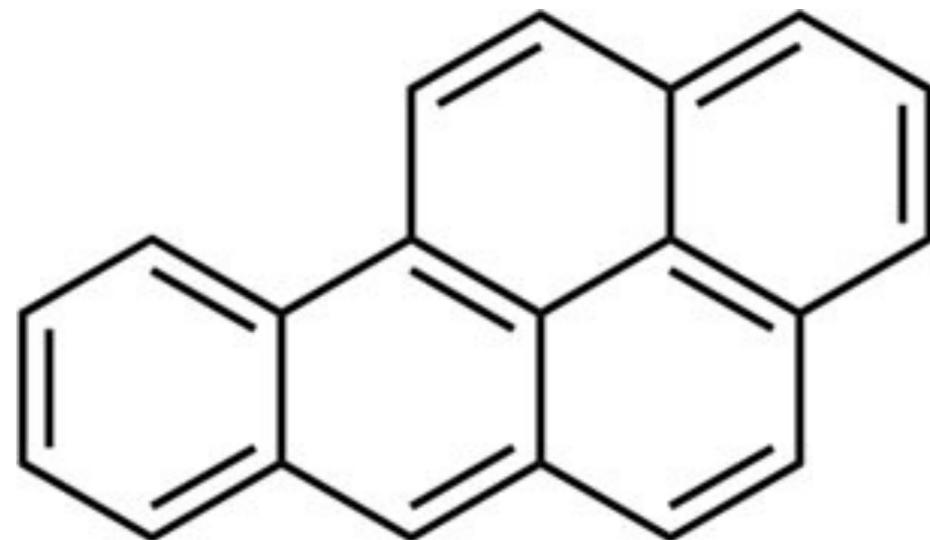
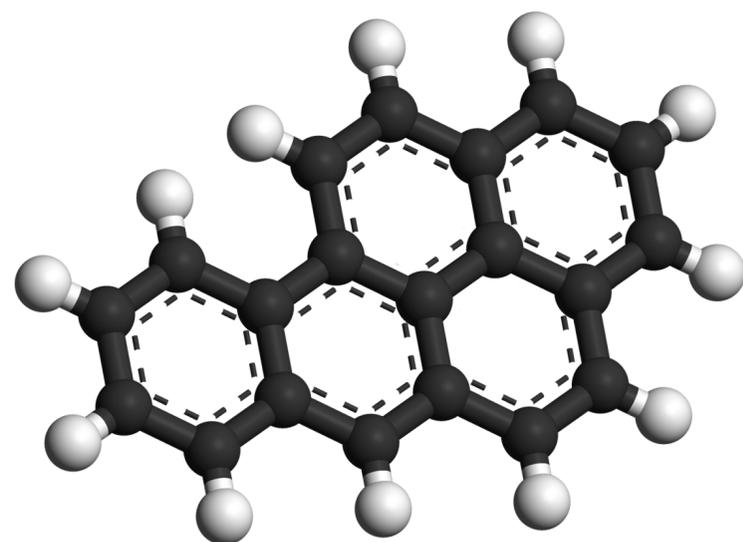
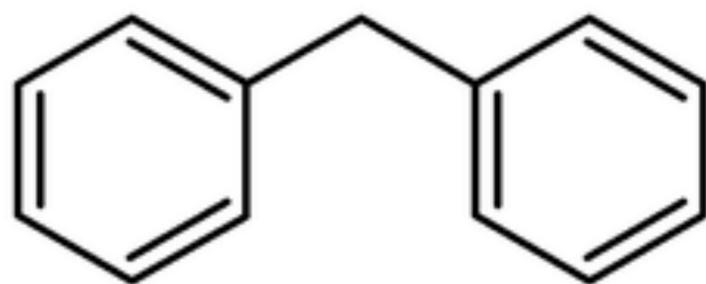


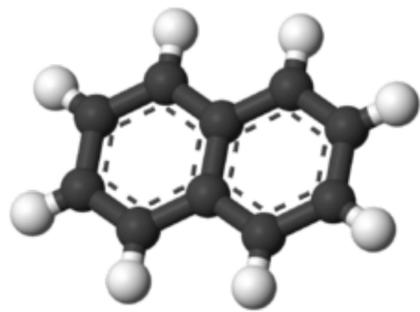


CLASSIFICAÇÃO DE CADEIAS AROMÁTICAS

CADEIA POLINUCLEAR

Cadeia que possui mais de um núcleo aromático.

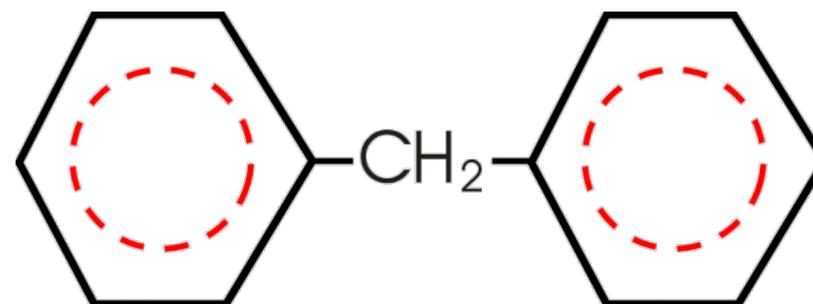




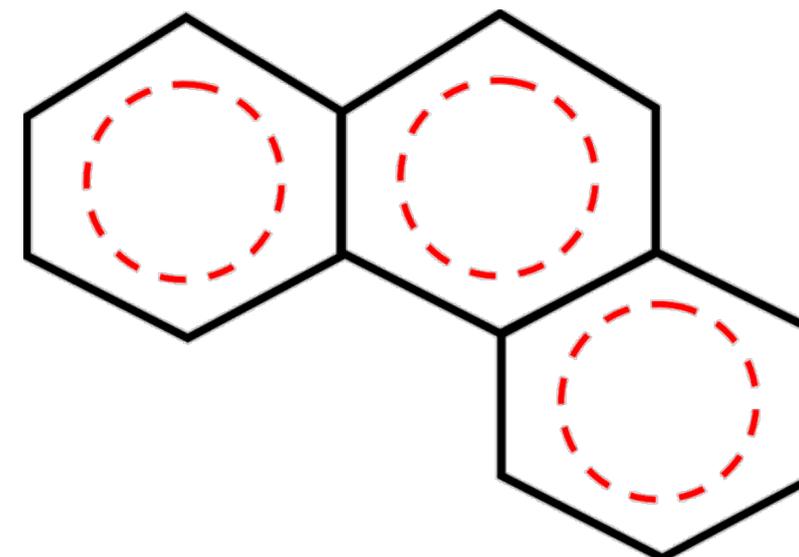
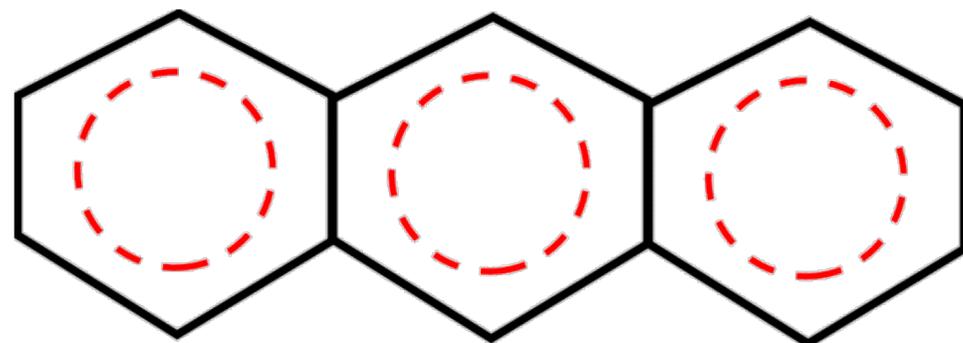
CLASSIFICAÇÃO DE CADEIAS AROMÁTICAS

AS CADEIAS POLINUCLEARES PODEM SER:

Núcleos isolados:

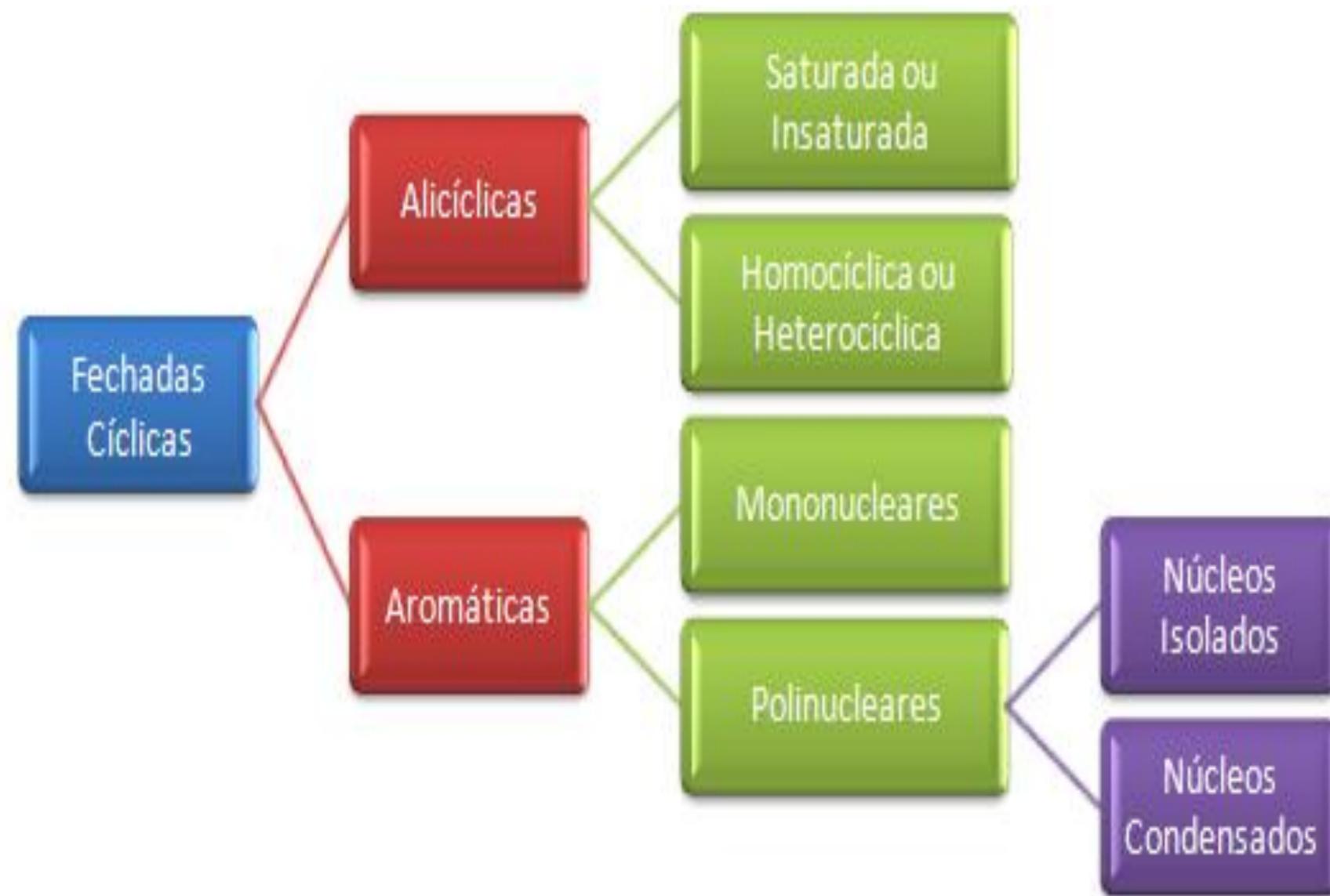


Núcleos condensados:

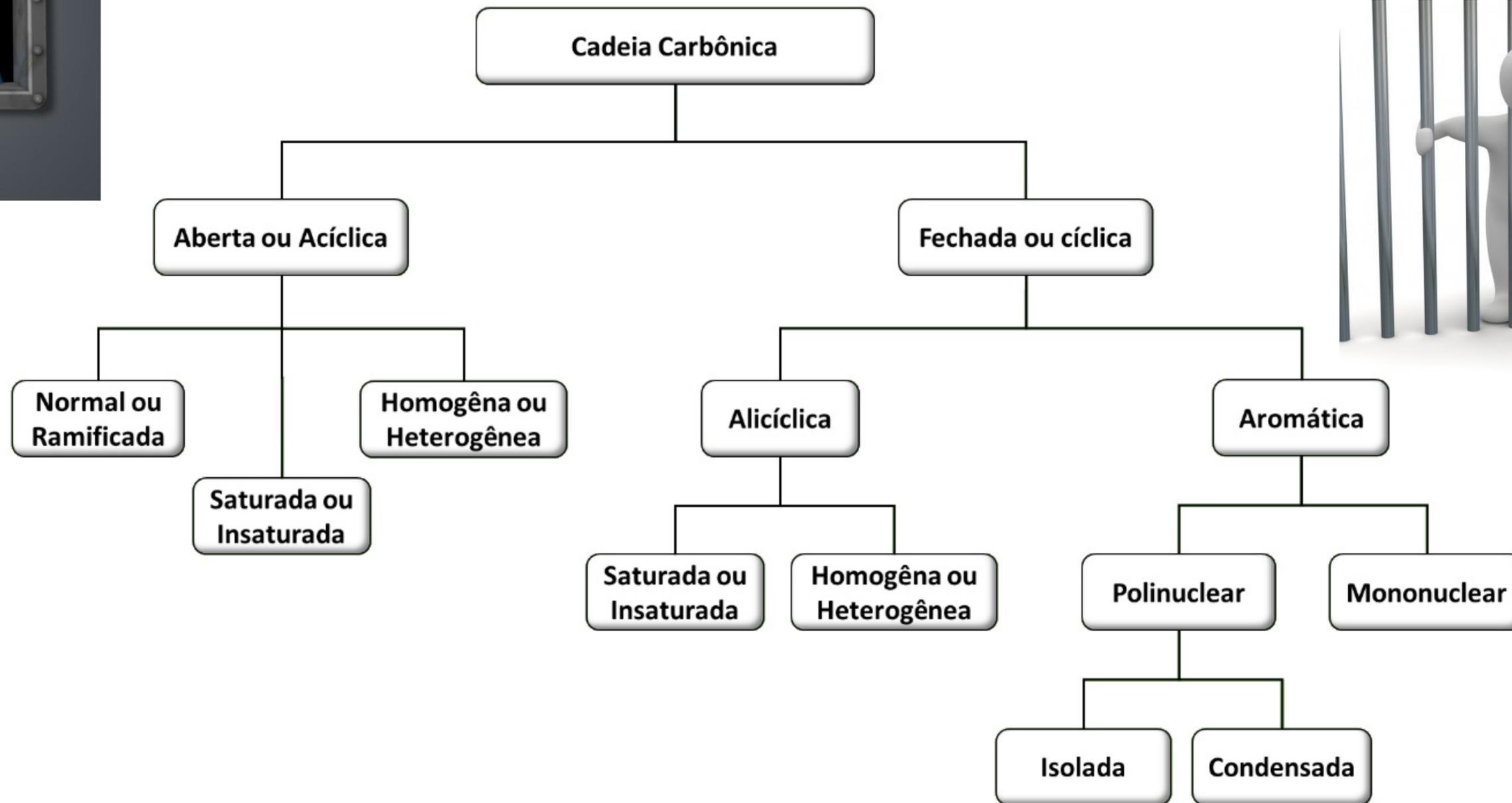
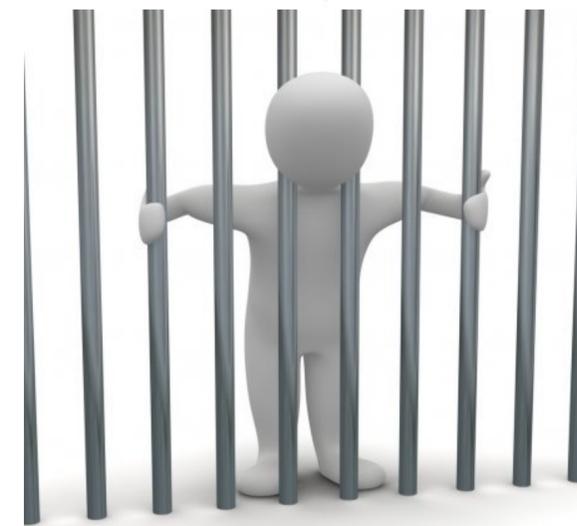
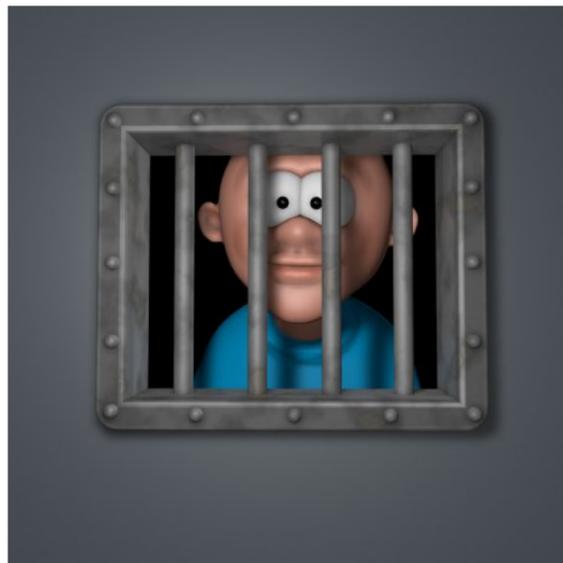


Classificação das Cadeias Carbônicas

Fechadas ou Cíclicas

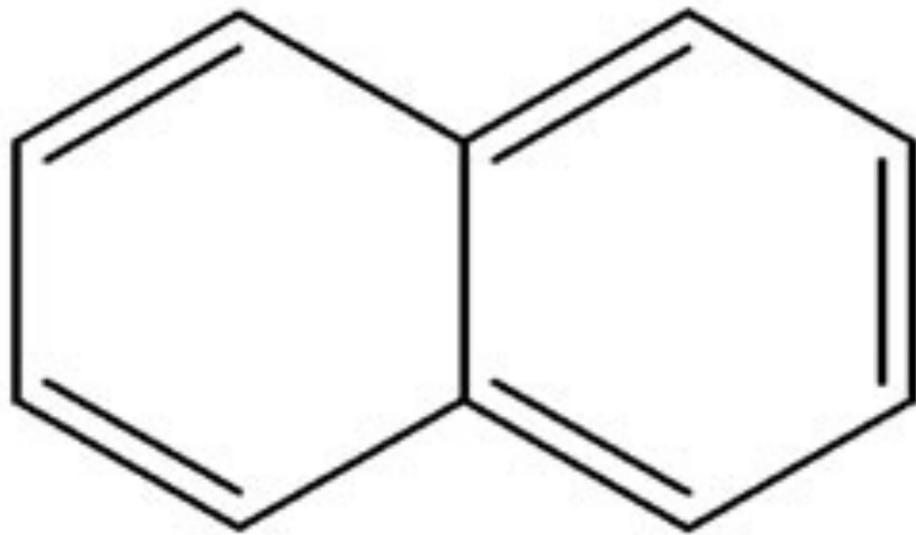


Cadeias Carbônicas

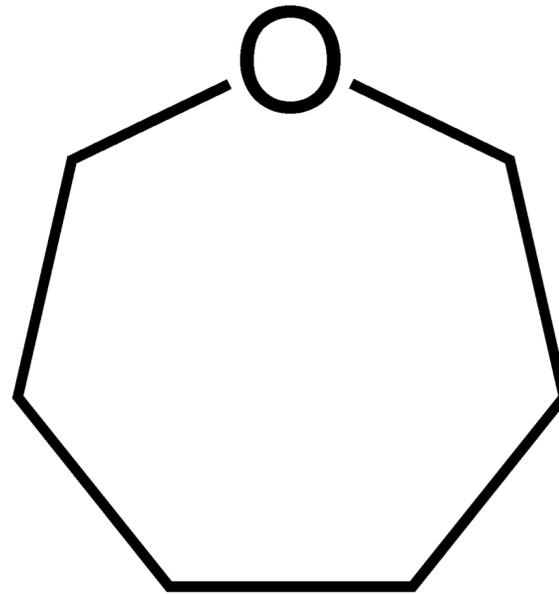


Classificação de Compostos

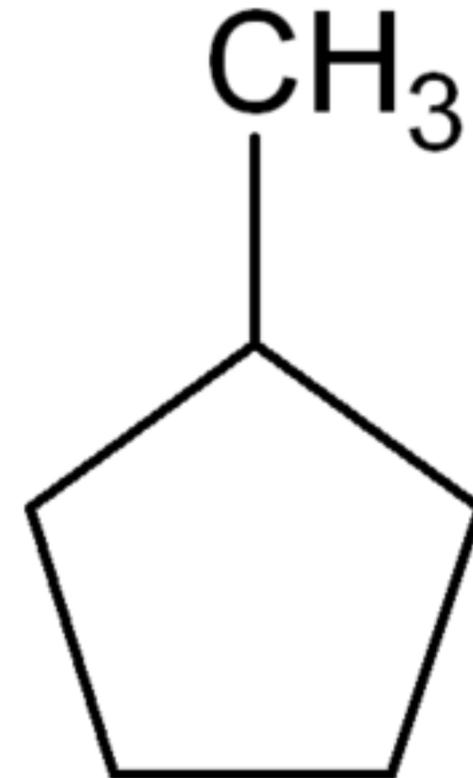
Os compostos orgânicos são classificados em AROMÁTICOS, HETEROCÍCLICOS ou ALIFÁTICOS.



aromático

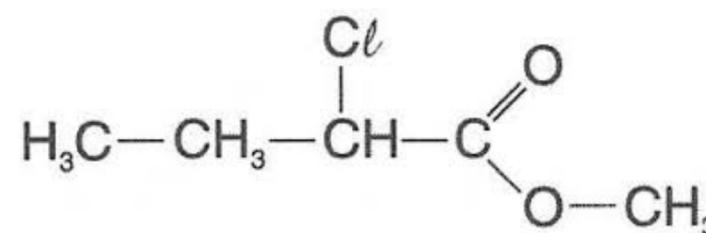
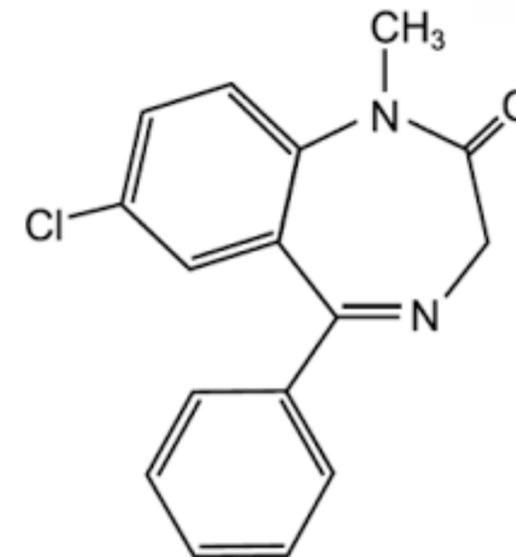
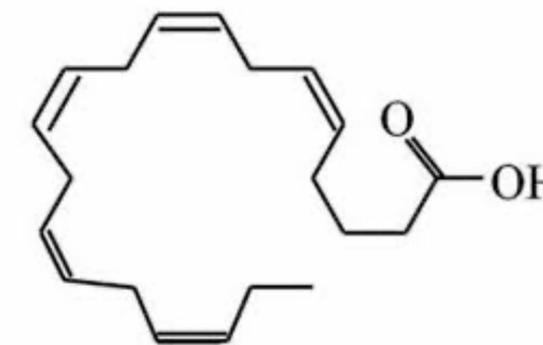
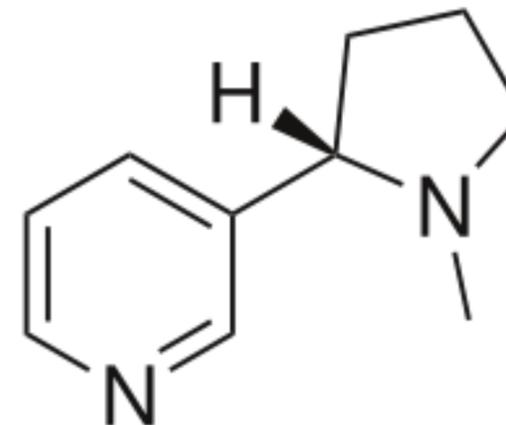
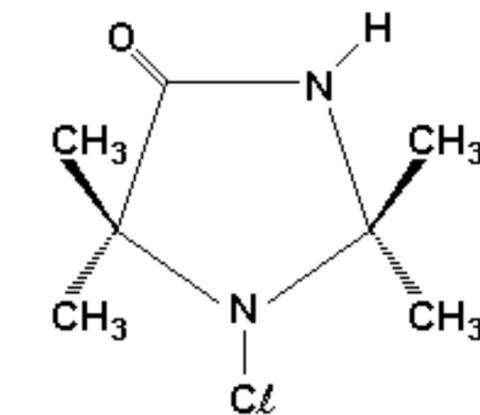
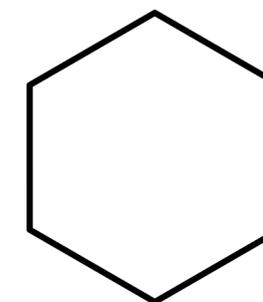
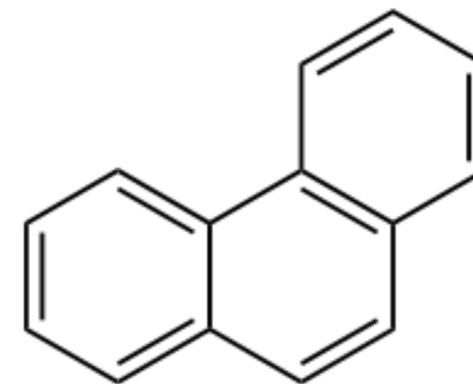
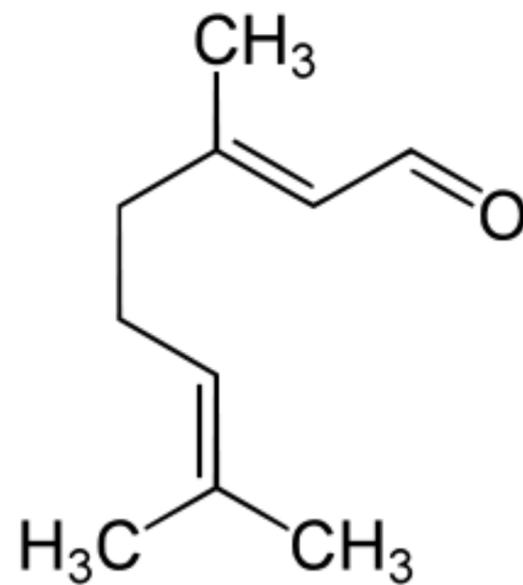
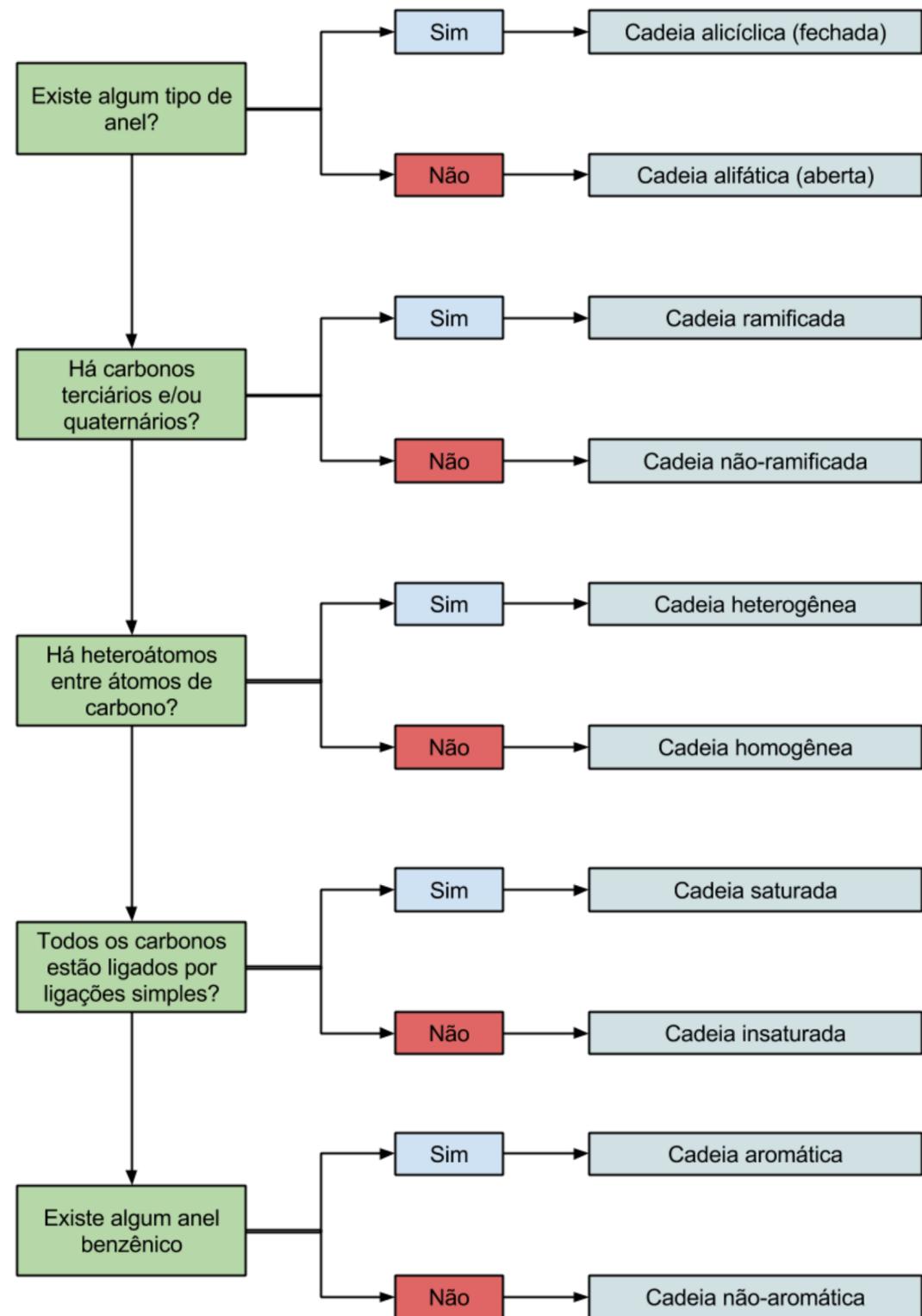


heterocíclico



alifático





Resumo da Aula

