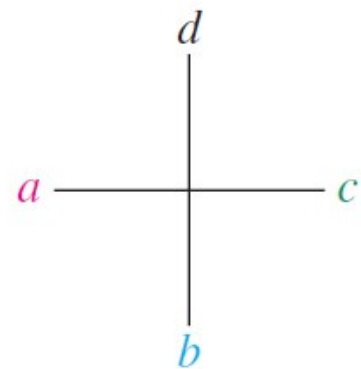
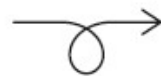
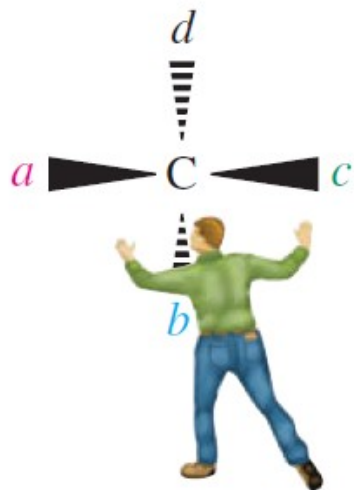
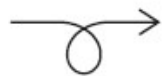
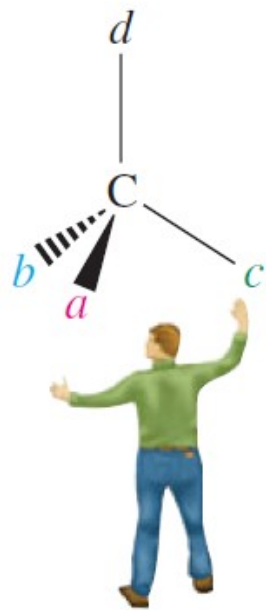
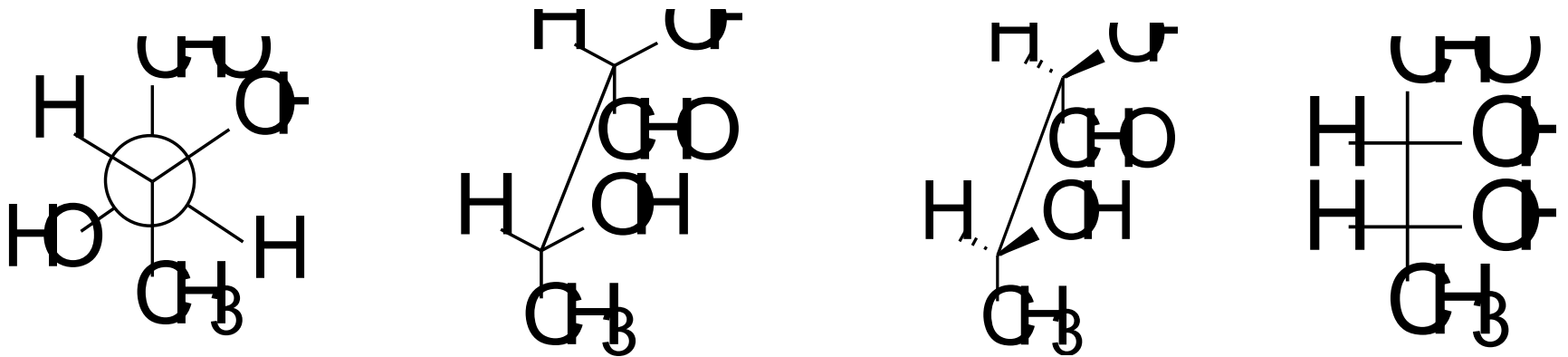


STEREOCHEMIE



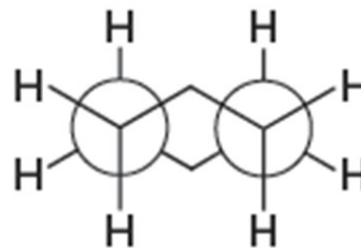
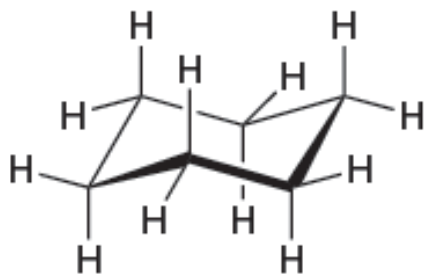
Typy vzorců

Následující vzorec v Newmanově projekci přepište do Fischerovy projekce



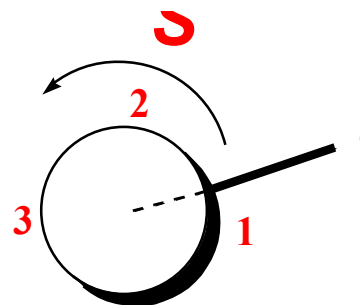
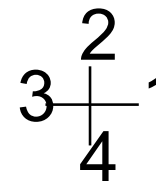
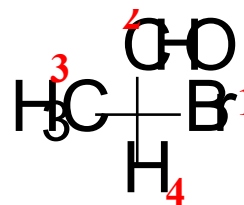
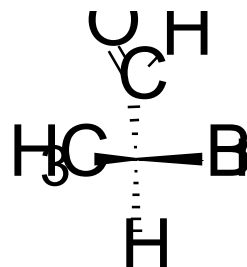
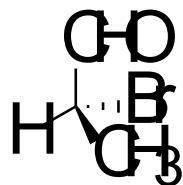
Typy vzorců

Molekulu cyklohexanu překreslete do Newmanovy projekce

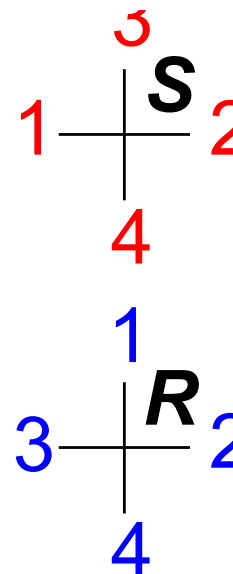
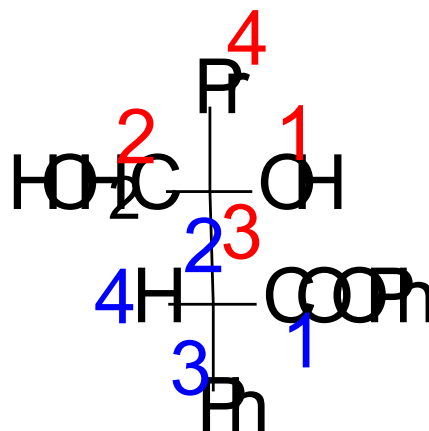
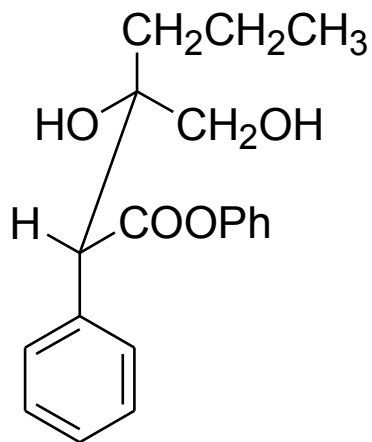


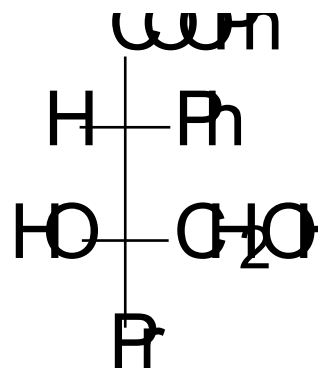
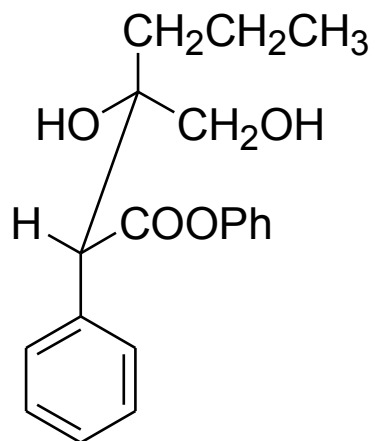
Vytvořte systematický název uvedené sloučeniny

(2S)-2-bromopropanal



U následující sloučeniny identifikujte centra chiralidy a určete na nich absolutní konfiguraci

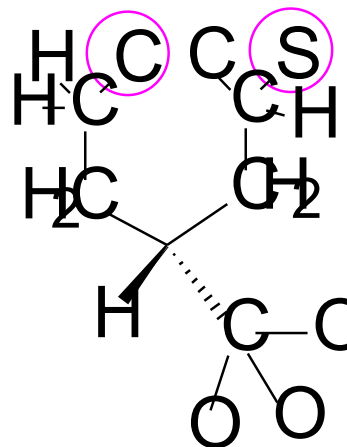
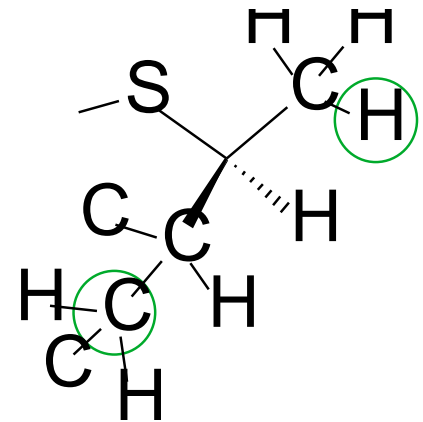
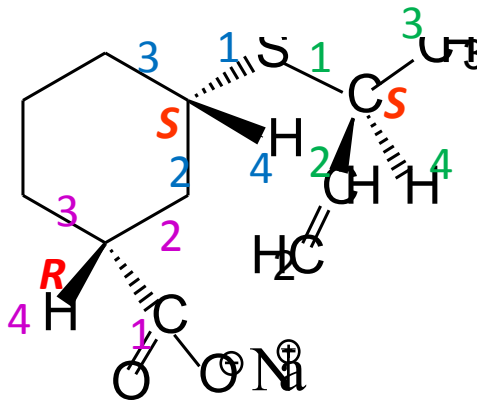
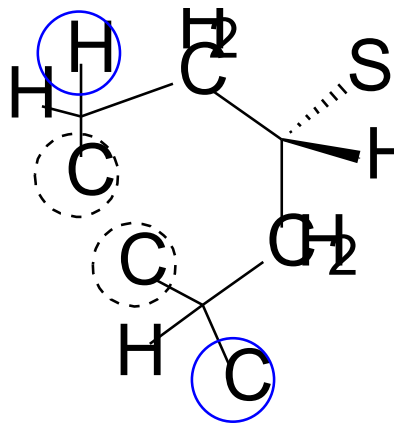




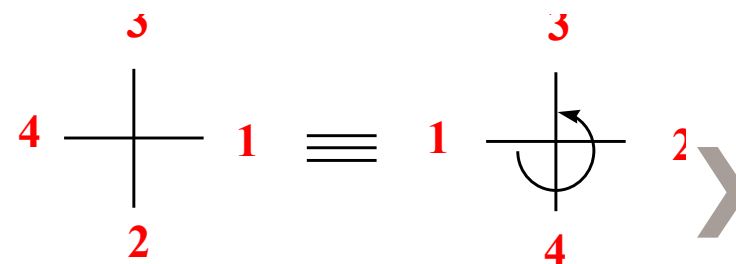
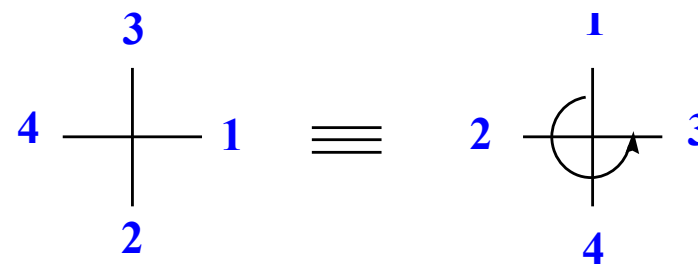
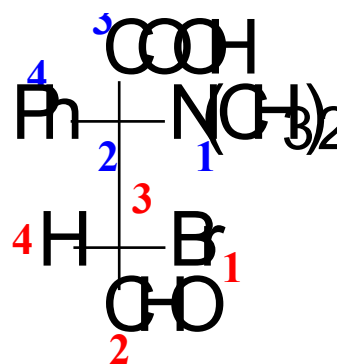
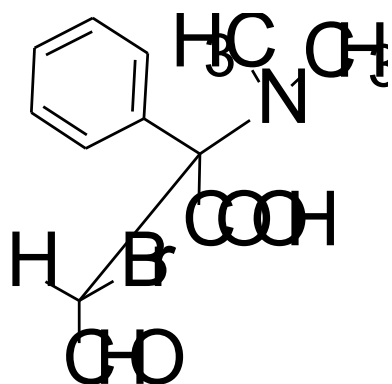
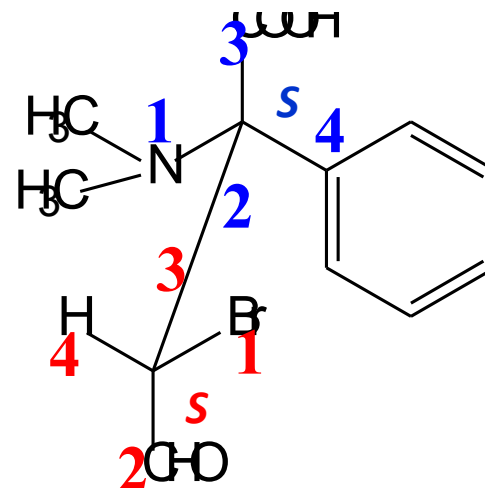
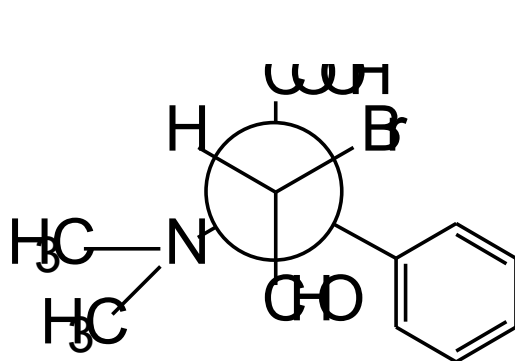
Správně zakreslená Fischerova projekce



Označte centra chiralitity a určete na nich absolutní konfiguraci

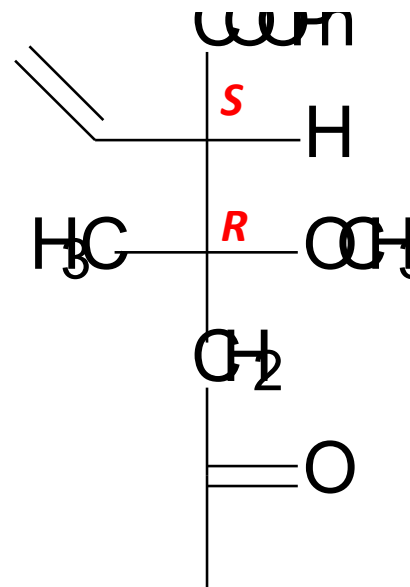
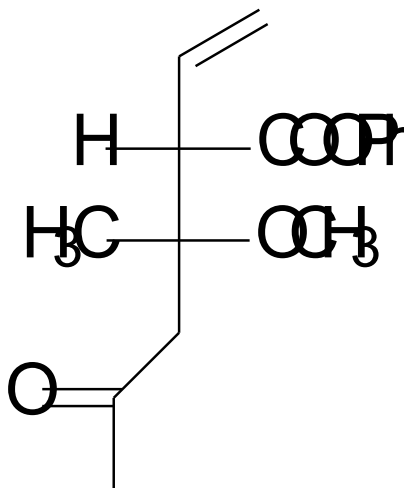
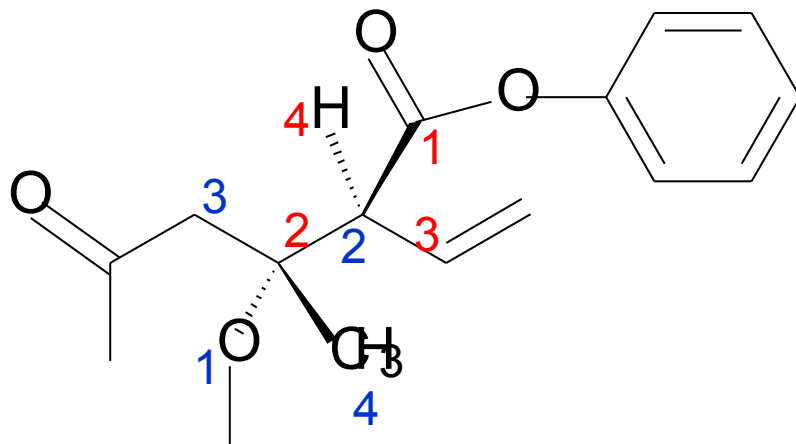


Najděte v molekule centra chirality a určete na nich absolutní konfiguraci a sloučeninu pojmenujte



(2S,3S)-3-brom-2-(N,N-dimethylamino)-2-fenyl-4-oxobutanová kyselina

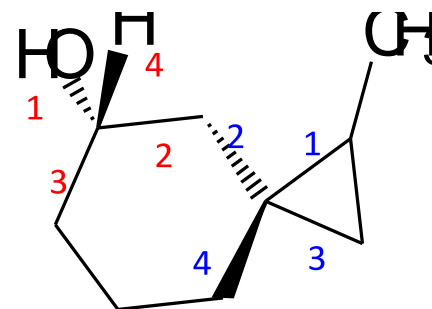
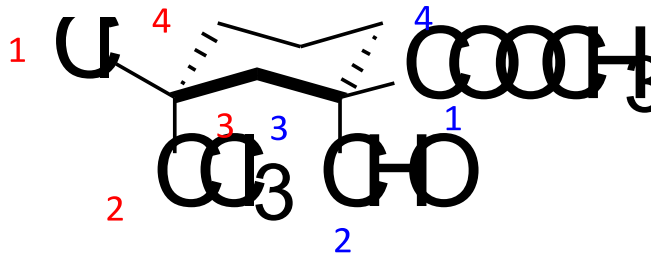
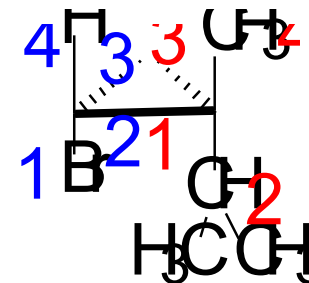
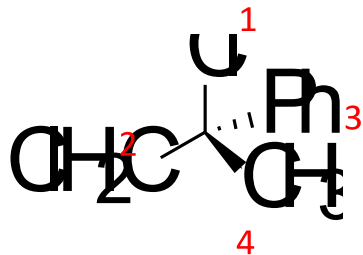
Molekulu překreslete do Fischerovy projekce a určete absolutní konfiguraci na centrech chiralidy



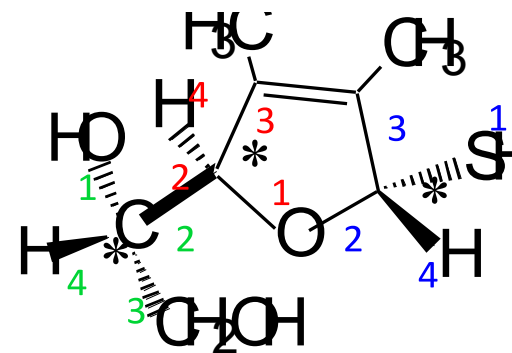
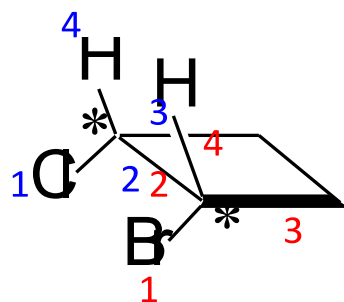
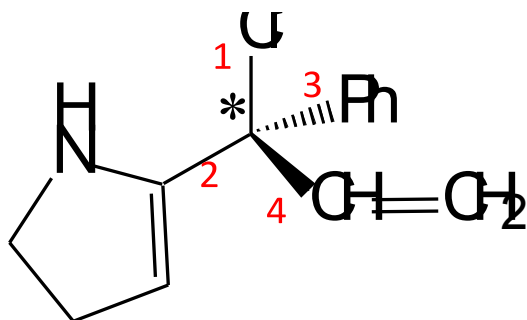
(2*S*,3*R*)-fenyl-3-methoxy-3-methyl-5-oxo-2-vinylhexanoát



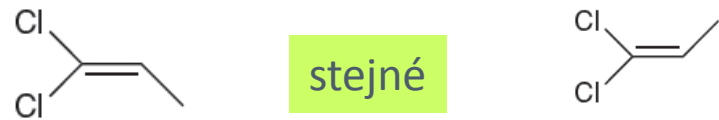
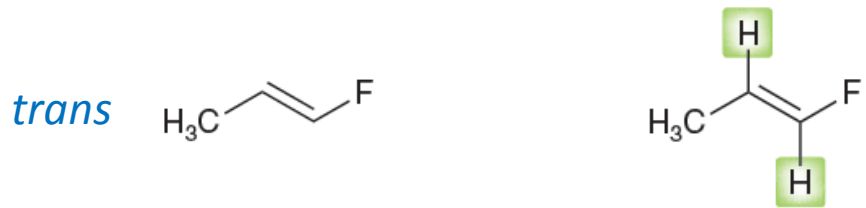
Označte * centra chiralitity a určete na nich absolutní konfiguraci



Na vyznačených centrech chirality určete absolutní konfiguraci



» Geometrické izomery

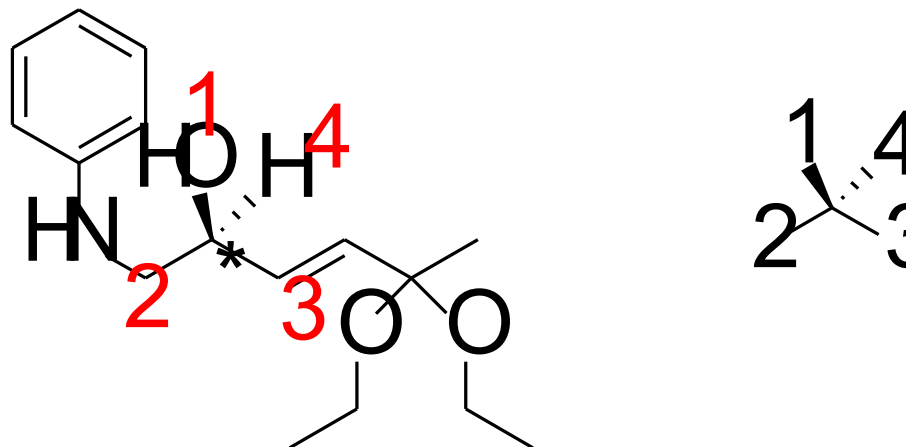


stejné

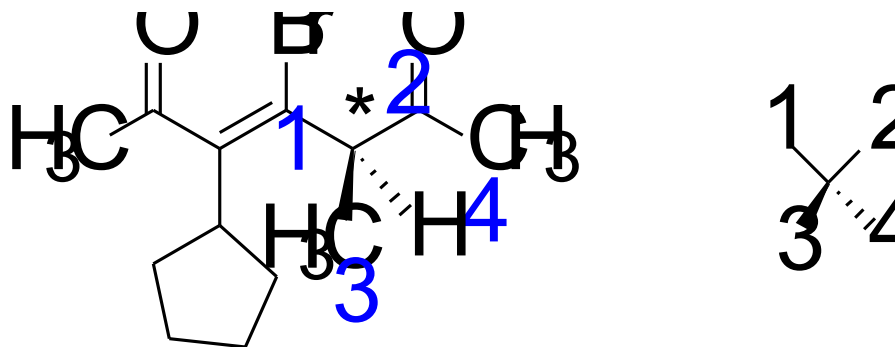


Nakreslete vzorce následujících sloučenin včetně znázornění prostorového uspořádání

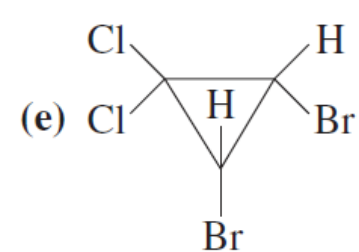
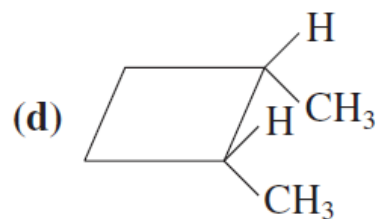
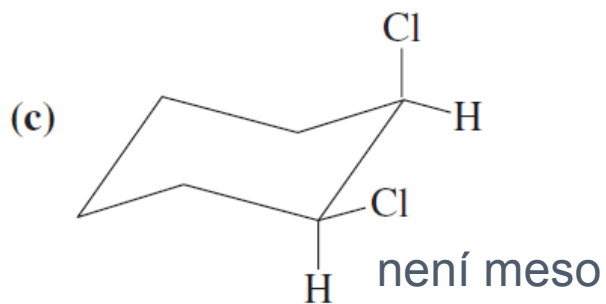
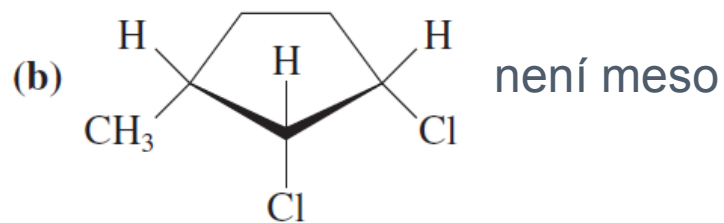
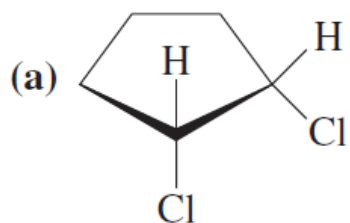
(2*S*,3*E*)-1-(*N*-fenylamino)-5,5-diethoxyhex-3-en-2-ol



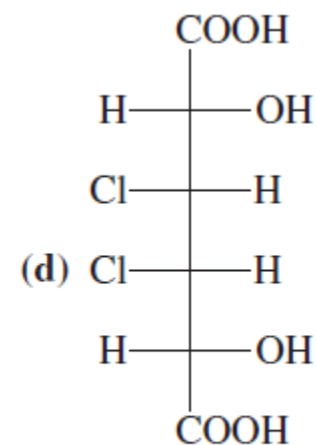
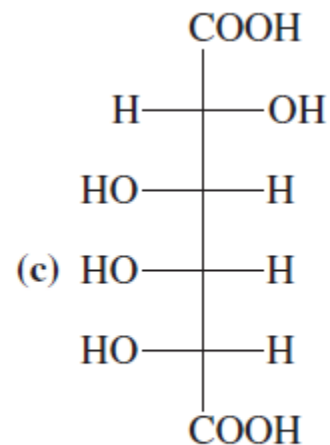
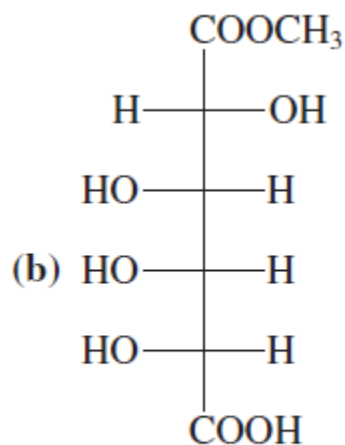
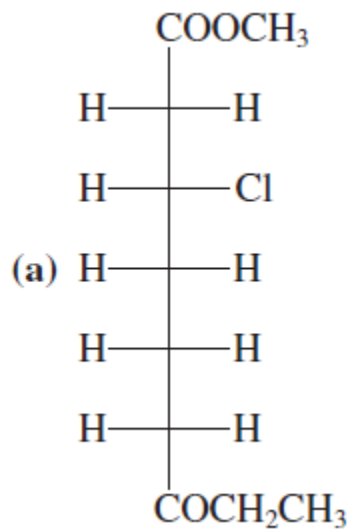
(5*R*,3*Z*)-4-brom-3-cyklopentyl-5-methylhept-3-en-2,6-dion



Která ze sloučenin není *meso* - sloučeninou



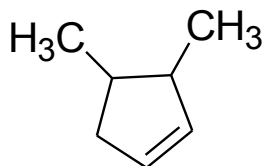
Která ze sloučenin nebude opticky aktivní



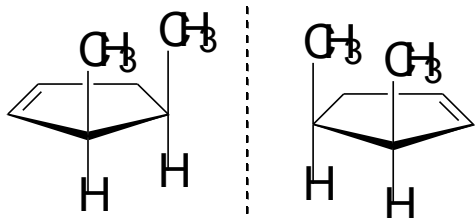
Opticky aktivní není **d**



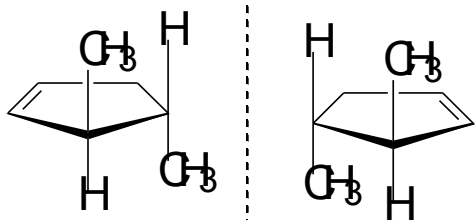
Nakreslete možné stereoizomery uvedených sloučenin. U každé z nich označte, zda otáčí rovinu polarizovaného světla či nikoli.



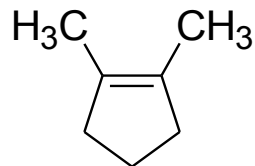
otáčí všechny



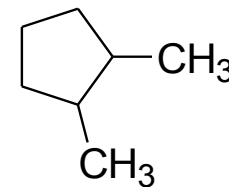
diastereomery



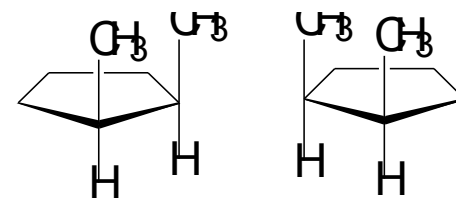
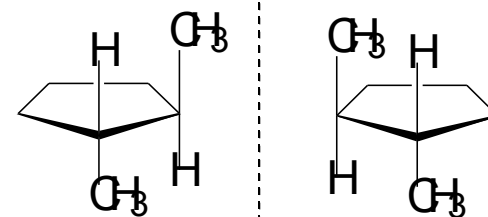
enantiomery



neotáčí



otáčí

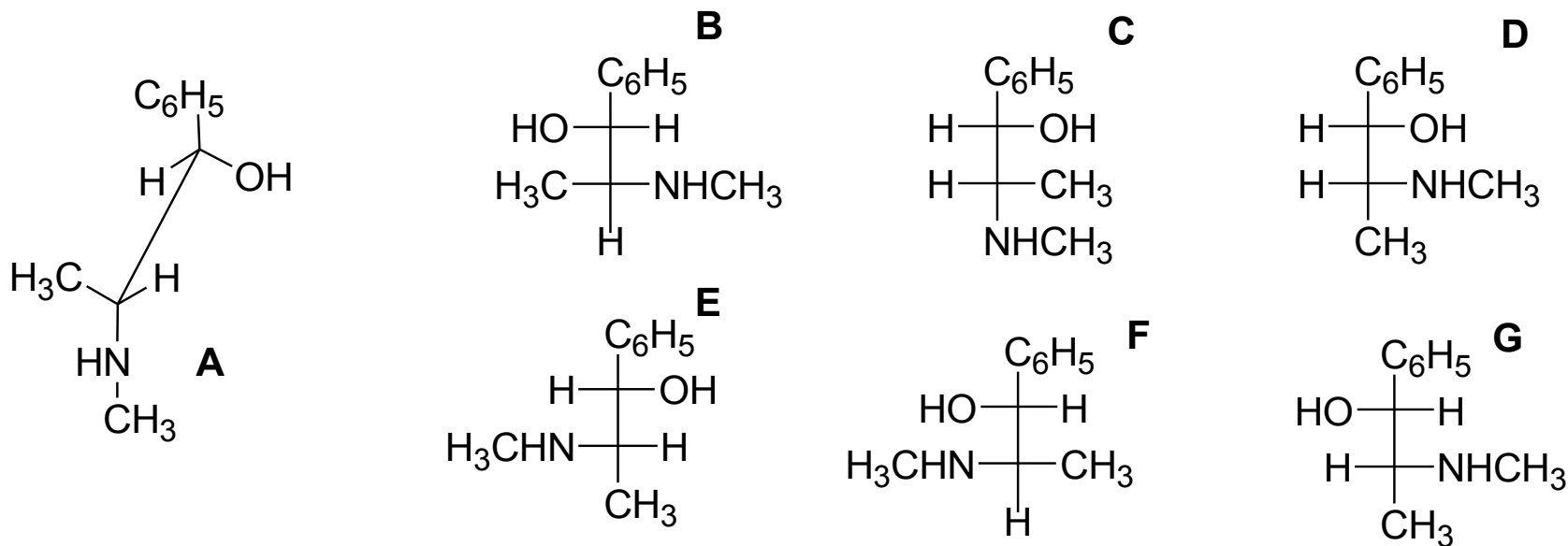


tatožlátko
meso-sloučenina

neotáčí



Efedrin (A) se používá jako lék, která z uvedených projekcí odpovídá Fischerově projekci látky (A). Vytvořte systematický název efedrinu včetně určení absolutní konfigurace na centrech chiralidy.



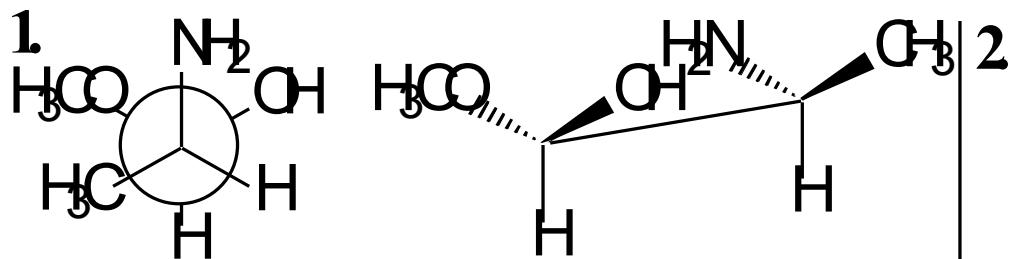
Vzorci **F** a **G**

(1*R*,2*R*)-1-fenyl-2-(*N*-methylamino)propanol

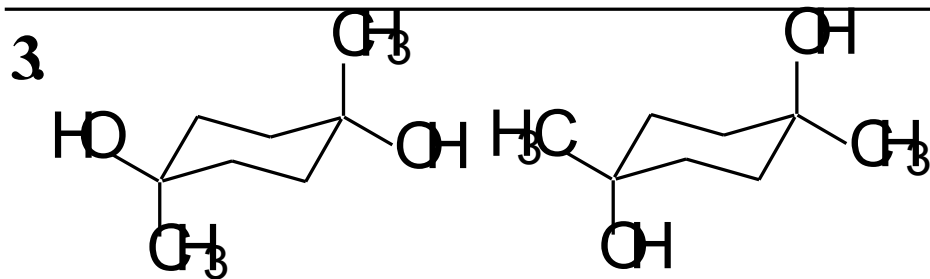
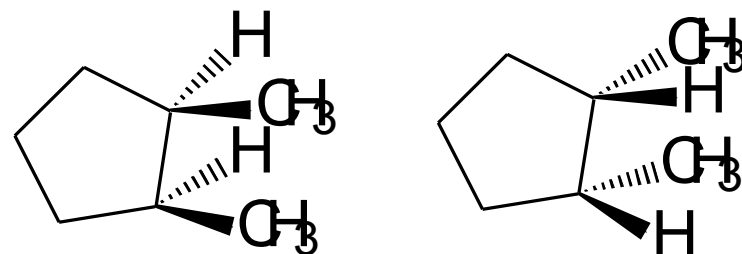


Určete, jaký je mezi uvedenými sloučeninami vzájemný stereochemický vztah

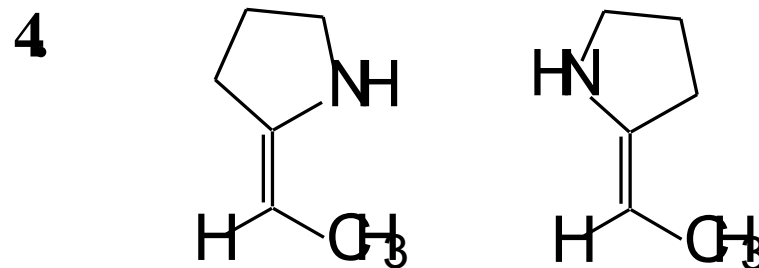
1. diastereomery



2. stejné (*meso*-)



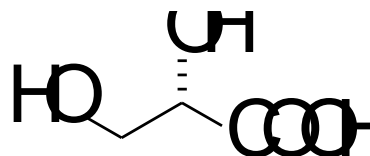
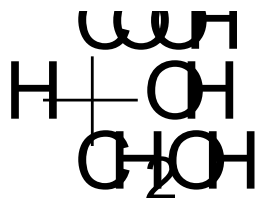
3. konformace téže látky



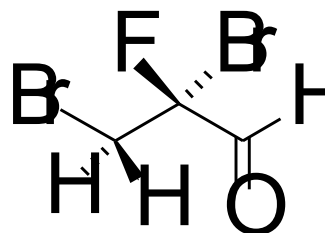
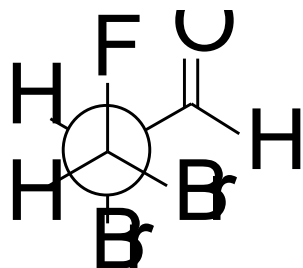
4. diastereomery
geometrické izomery



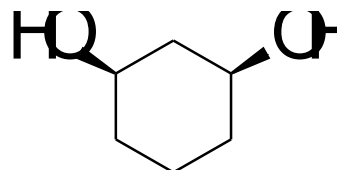
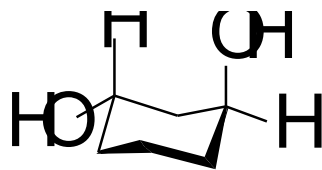
Určete, jaký je mezi uvedenými sloučeninami vzájemný stereochemický vztah



enantiomery



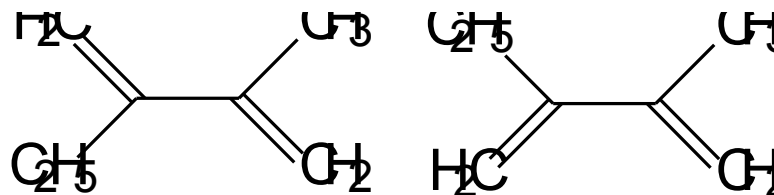
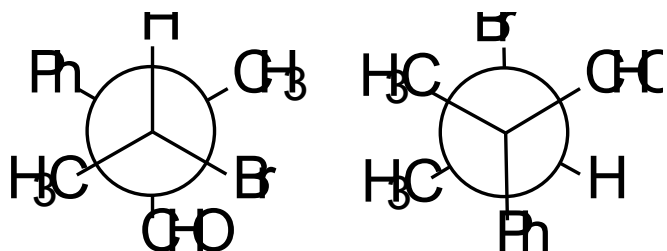
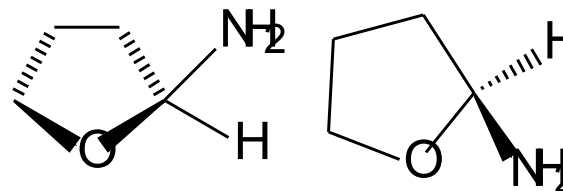
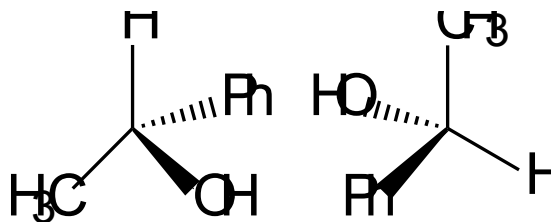
konstituční izomery



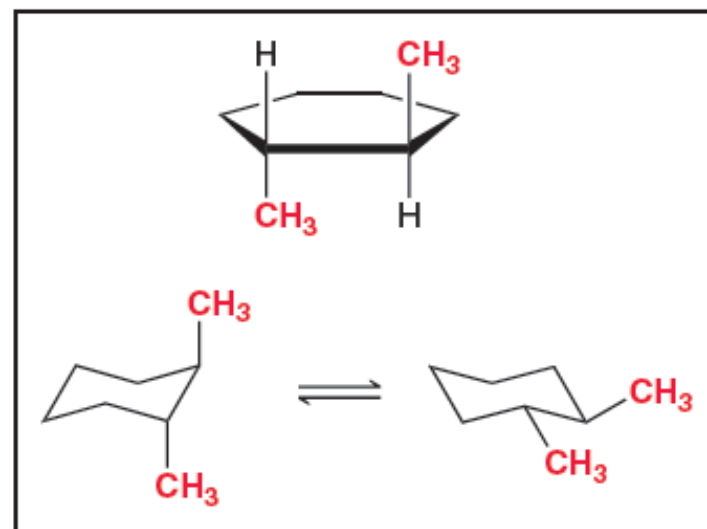
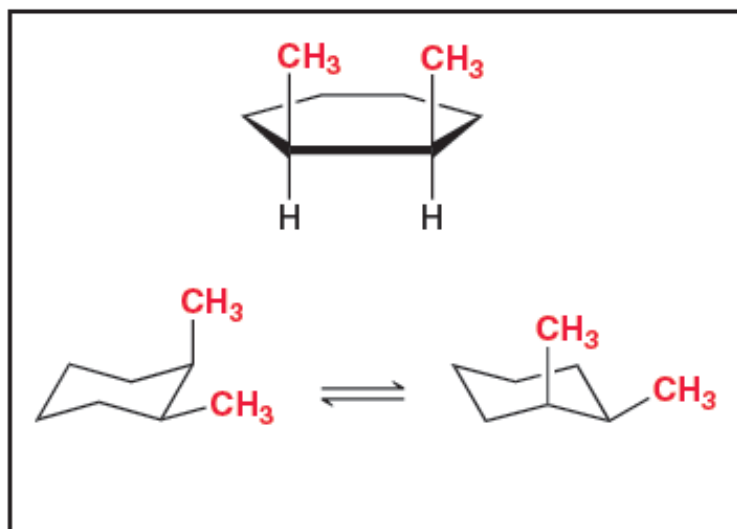
diastereomery



Určete, jaký je mezi uvedenými sloučeninami vzájemný stereochemický vztah



Určete, který ze dvou možných geometrických izomerů 1,2-dimethylcyklohexanu je termodynamicky stabilnější?

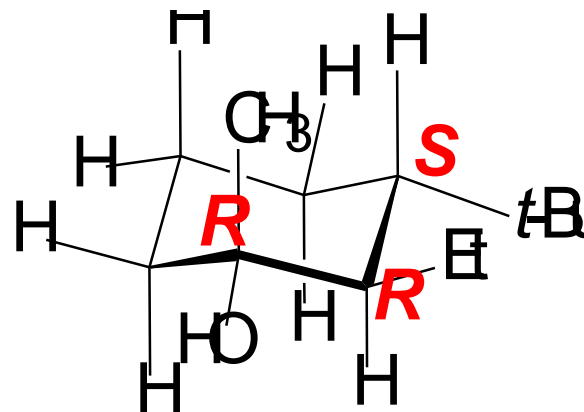
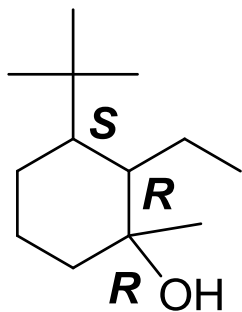


Může zaujmout konformaci, v níž je diekvatoriální pozice obou objemných substituentů

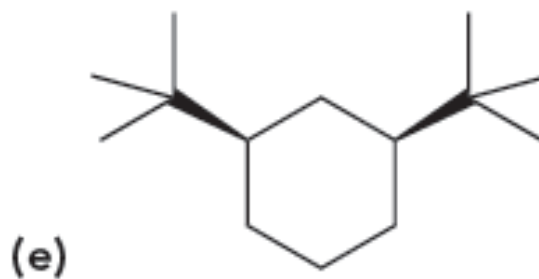
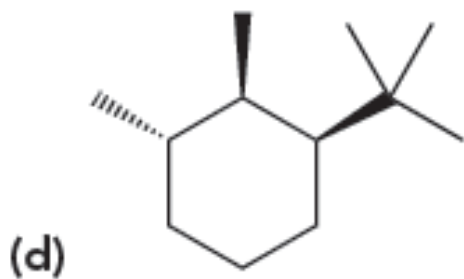
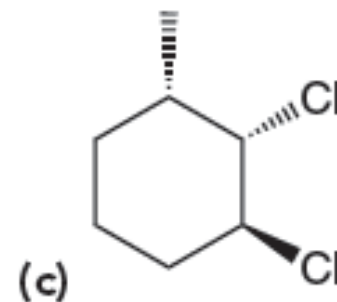
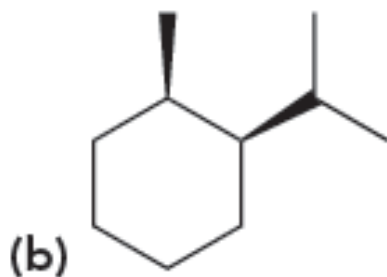
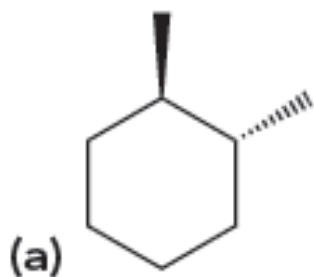


Níže uvedenou sloučeninu nakreslete v její nejstabilnější konformaci

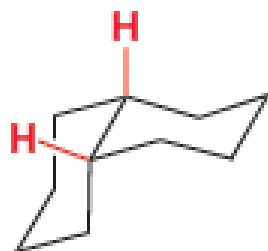
(1*R*,2*R*,3*S*)-3-*tert*-butyl-2-ethyl-1-methylcyklohexanol



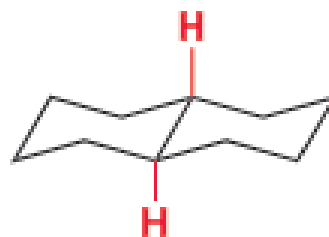
Nakreslete nejstabilnější konformaci uvedených sloučenin



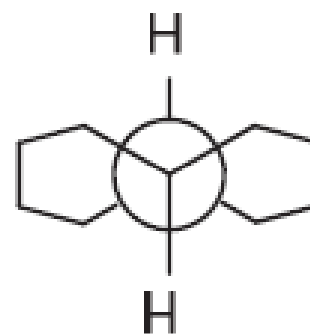
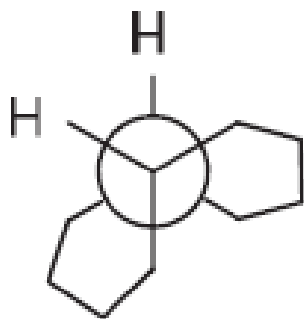
Určete, který ze dvou možných geometrických izomerů dekalinu je termodynamicky stabilnější?



cis-Decalin



trans-Decalin

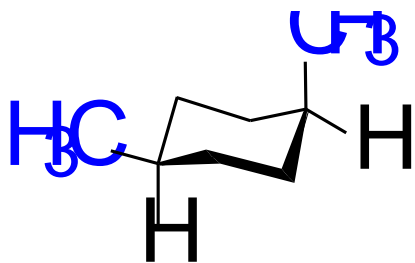


trans- dekalin je stabilnější – pouze 2 gauche interakce (*cis* má 3)



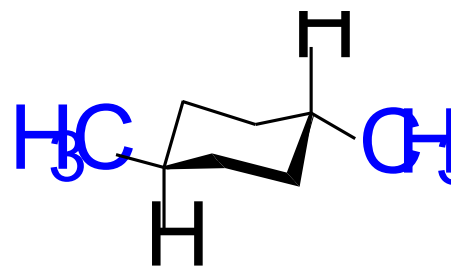
Určete, který z izomerů dimethylcyklohexanu je chirální?

1,4-dimethylcyklohexan



cis

achirální, rovina symetrie



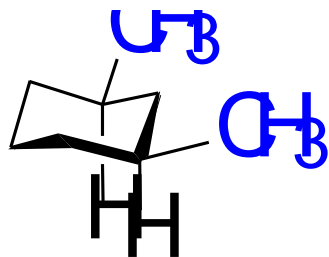
trans

achirální, rovina symetrie



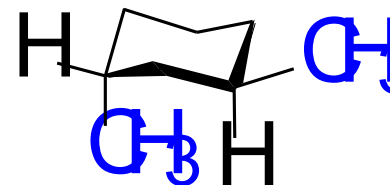
Určete, který z izomerů dimethylcyklohexanu je chirální?

1,3-dimethylcyklohexan



cis

achirální, rovina symetrie



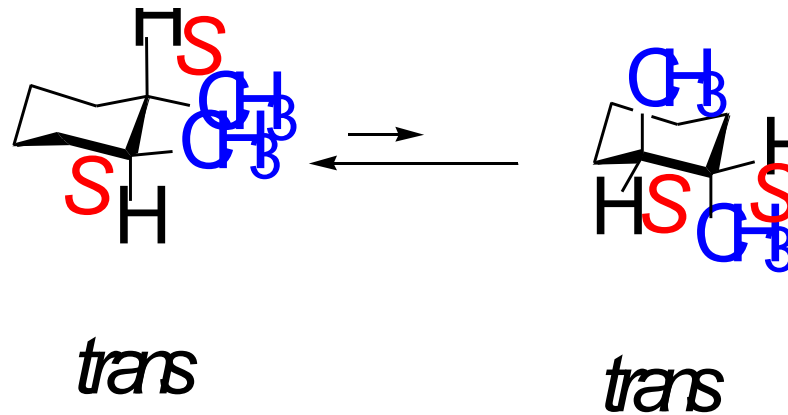
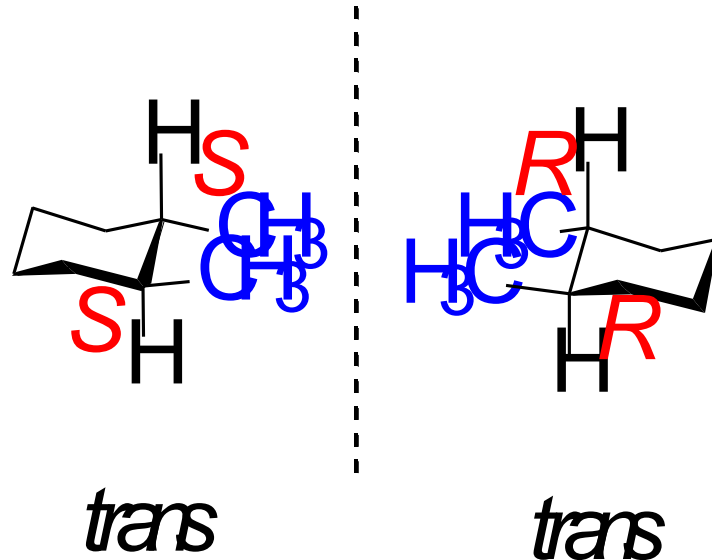
trans

chirální



Určete, který z izomerů dimethylcyklohexanu je chirální?

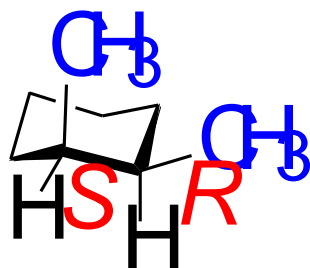
1,2-dimethylcyklohexan



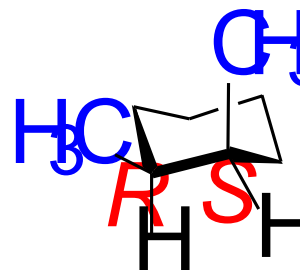
chirální

Určete, který z izomerů dimethylcyklohexanu je chirální?

1,2-dimethylcyklohexan



as



as

chirální **ALE POZOR!**

za normální teploty je není možné separovat
a jedná se o konformace téže látky

