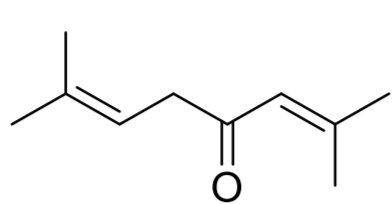
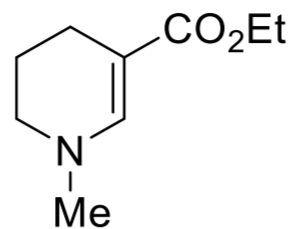


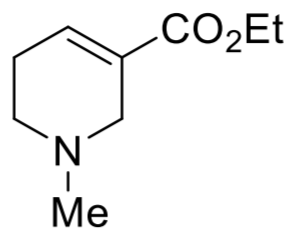
1. Ovatko seuraavat molekyylit konjugoituneita. Perustele.



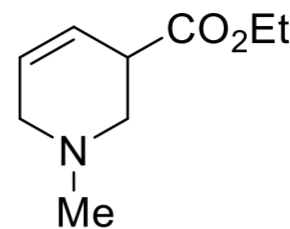
A



B



C



D

STABIILI
TERTIAARINEN

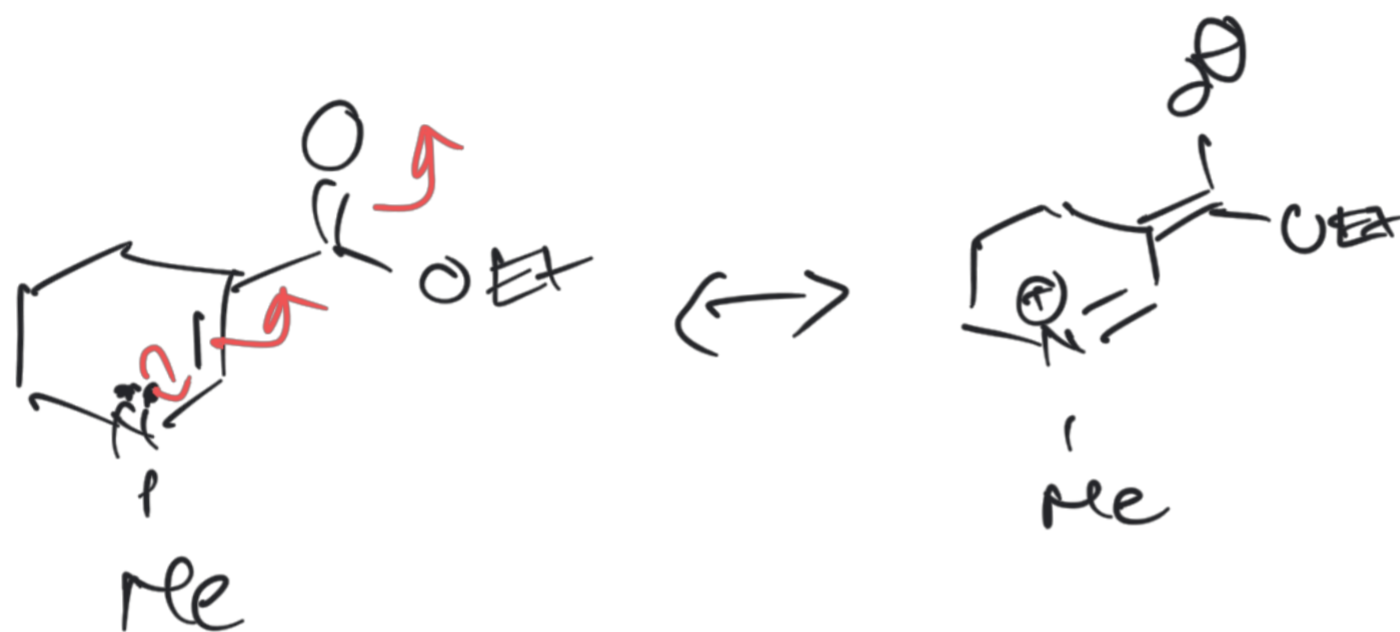
KATIONI

A

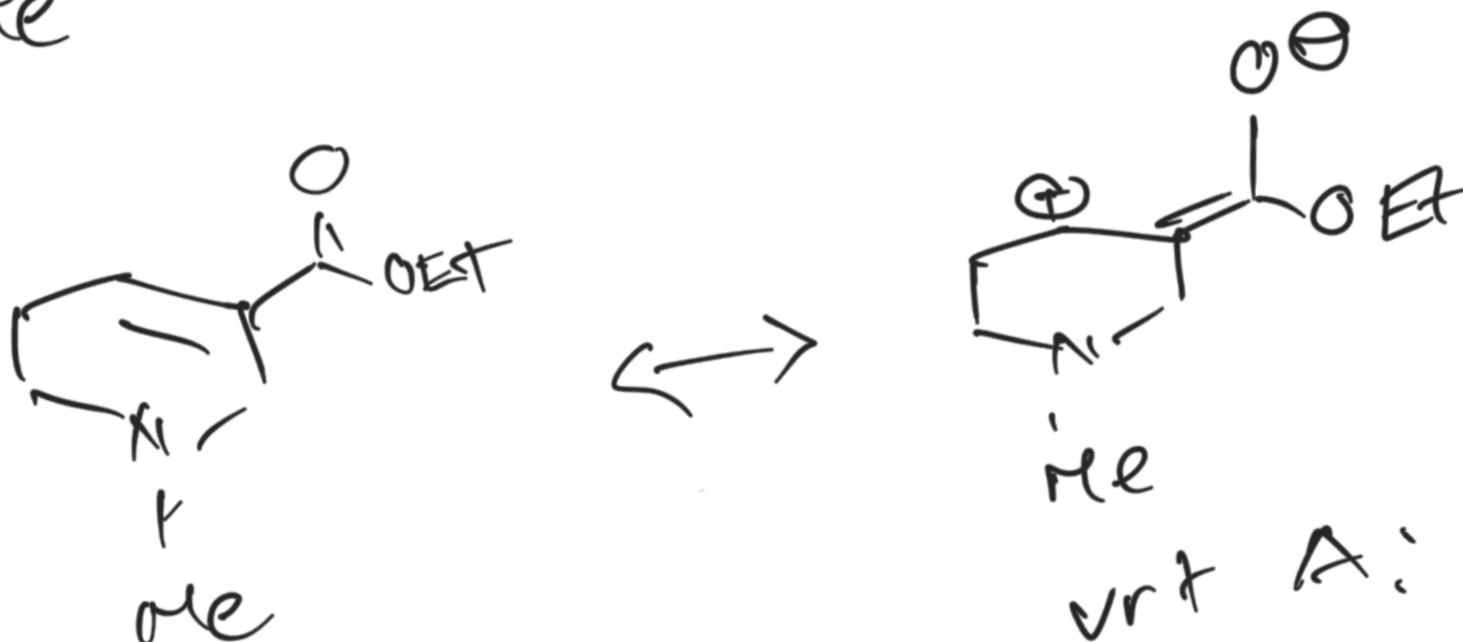


NEG. VARAUS
E-NEG. ADIILLA

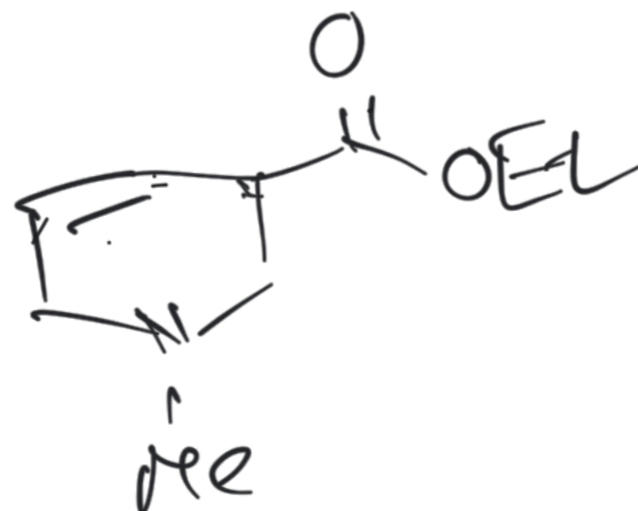
B



C

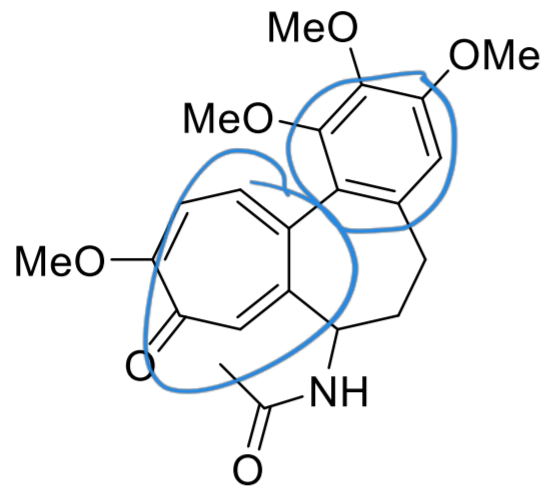
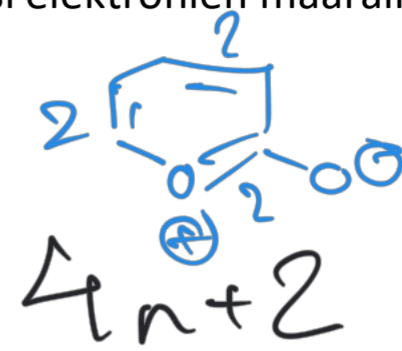
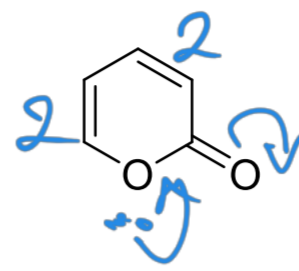
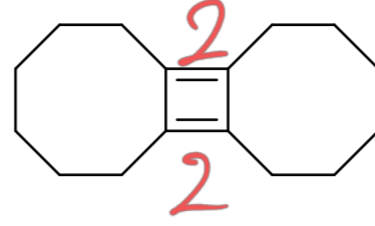
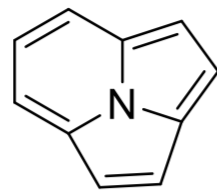
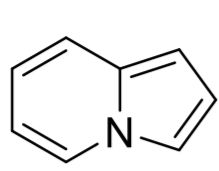


D

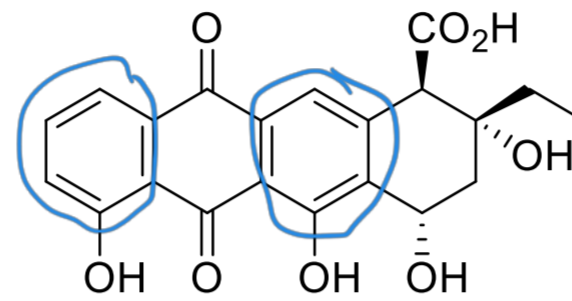


E - konjugoituneita

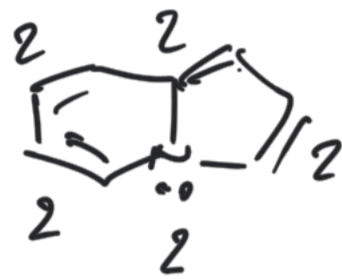
2. Mitkä (osat) seuraavissa molekyyliissä ovat aromaattisia? Perustele vastauksesi elektronien määrällä.



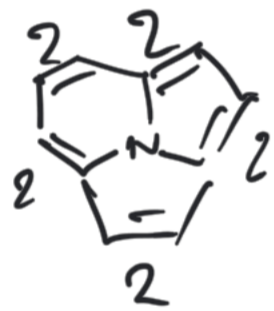
kolkisiini
syöpälääke syysmyrkkyliljasta



aklavinoni
tetrasykliiniantibiotti



$$= 10 = 4 \cdot 2 + 2 \quad \text{OK}$$

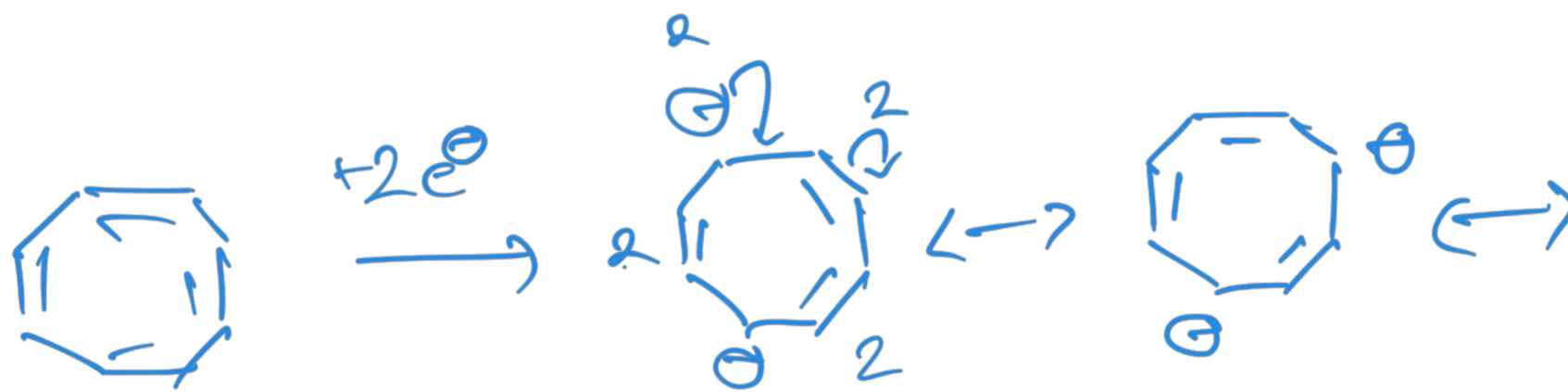
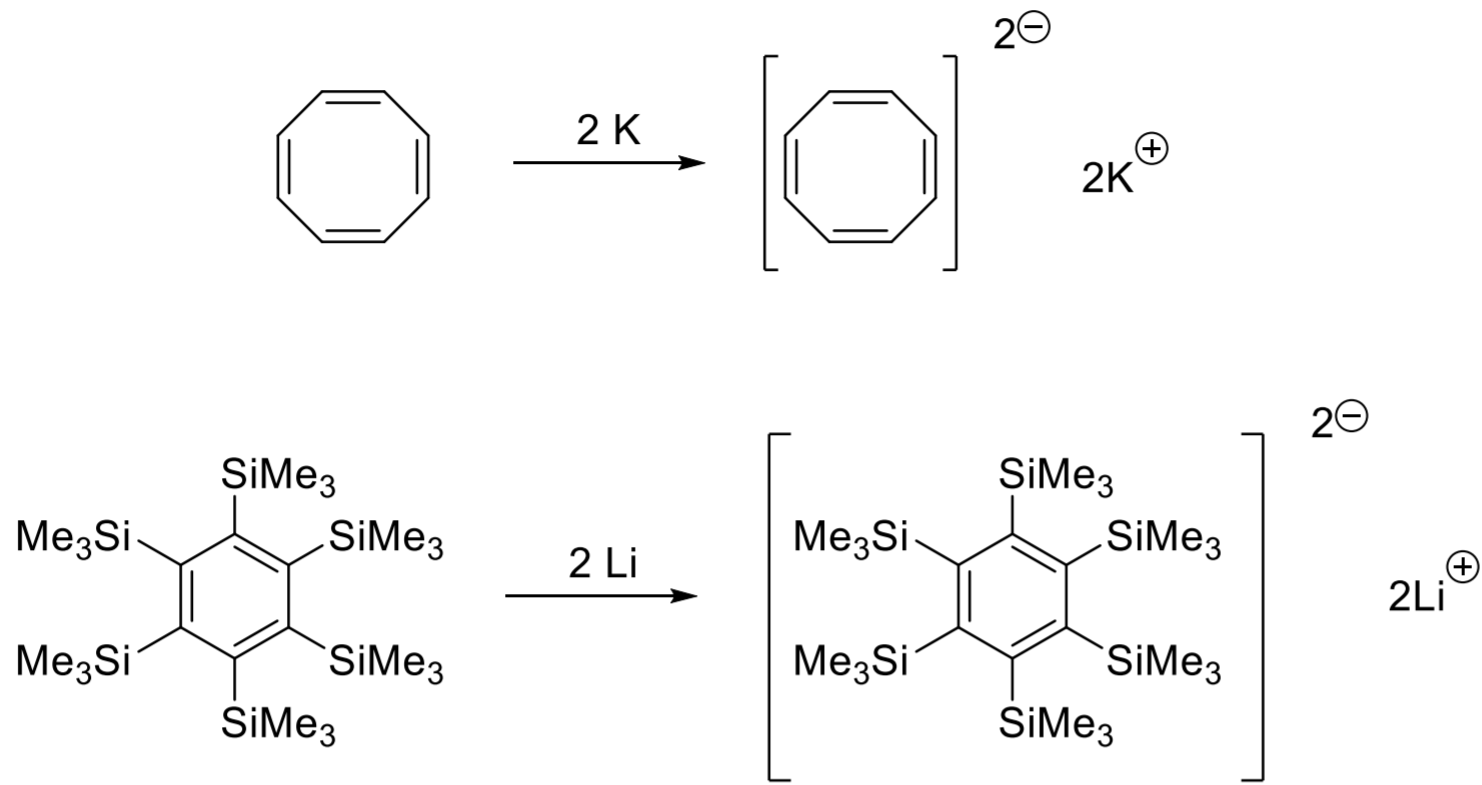


$$= 10 \quad \text{OK}$$

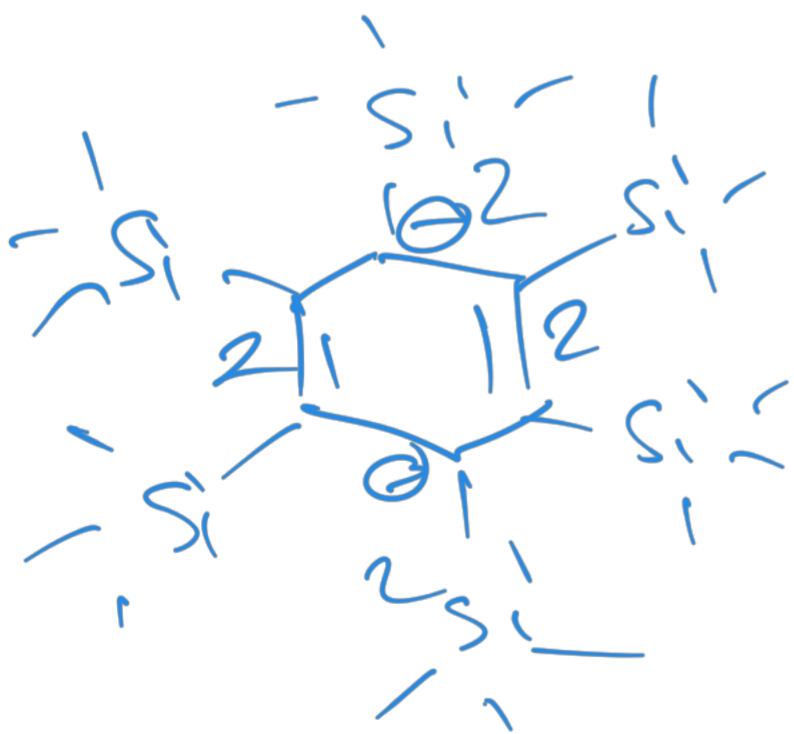


$$= 6 = 4 \cdot 1 + 2$$

3. Syklo-oktatetraeni reagoi helposti metallisen kaliumin kanssa muodostaen suolan K_2 [syklotetraeni]. Minkä muotoinen rengas tällä yhdisteellä on? Samankaltainen reaktio heksa(trimetyylisilyli)bentseenin ja litiumin kanssa tuottaa myös suolan. Minkä muotoinen rengas nyt on?

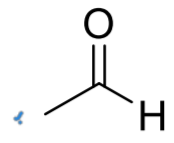


$10 e^- = 4 \cdot 2 + 2$ on arom!

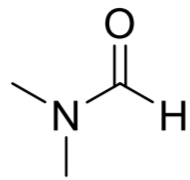


$8 e^- \Rightarrow$ arom!

4. Vesiliuoksessa asetaldehydi (etanaali) on noin 50 % hydratoitunut. Piirrä asetadehydinin hydraatin rakenne. Samoissa olosuhteissa N,N-dimetyyliformamidin hydraattia ei havaita. Miksi?



asetaldehydi



N,N-dimetyyliformamidi

