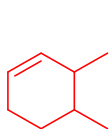
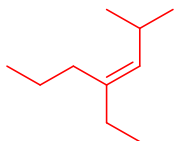


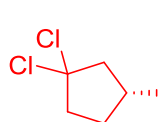
1) Scrivere le strutture delle seguenti molecole: a) 3,4-dimetilcicloesene; b) (Z)-4-etil-2-metil-3-eptene; c) (R)-1,1-dicloro-3-metilciclopentano; d) benzilbromuro



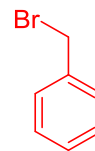
3,4-dimetilcicloesene



(Z)-4-etil-2-metil-3-eptene

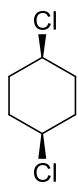


(R)-1,1-dicloro-3-metilciclopentano

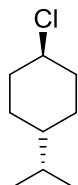


benzilbromuro

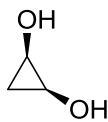
2) Indicare quali delle seguenti strutture sono chirali e quali sono forme meso. Assegnare la configurazione assoluta dei centri chirali delle molecole racchiuse nel riquadro.



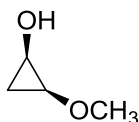
achirale



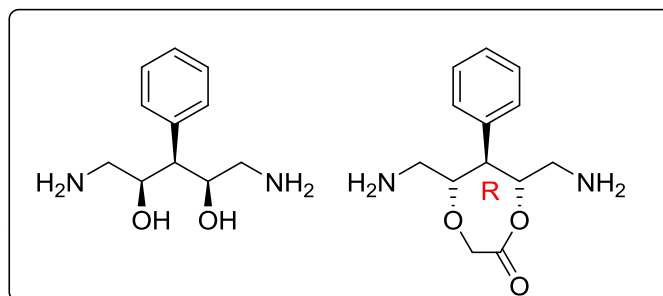
achirale



meso



chirale



R

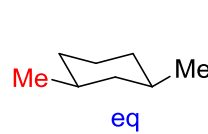
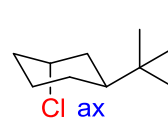
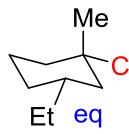
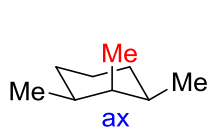
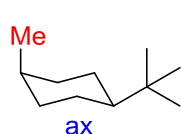
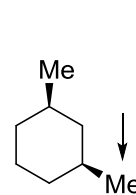
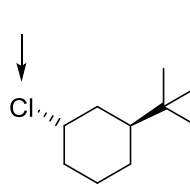
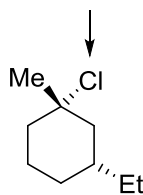
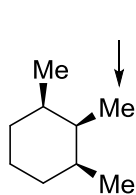
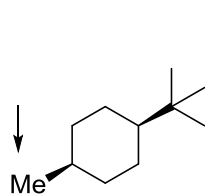
meso

S

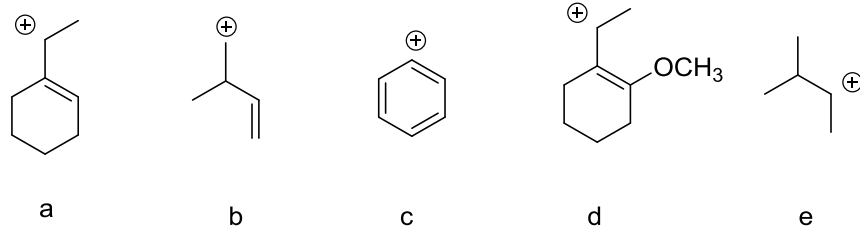
S chirale

R

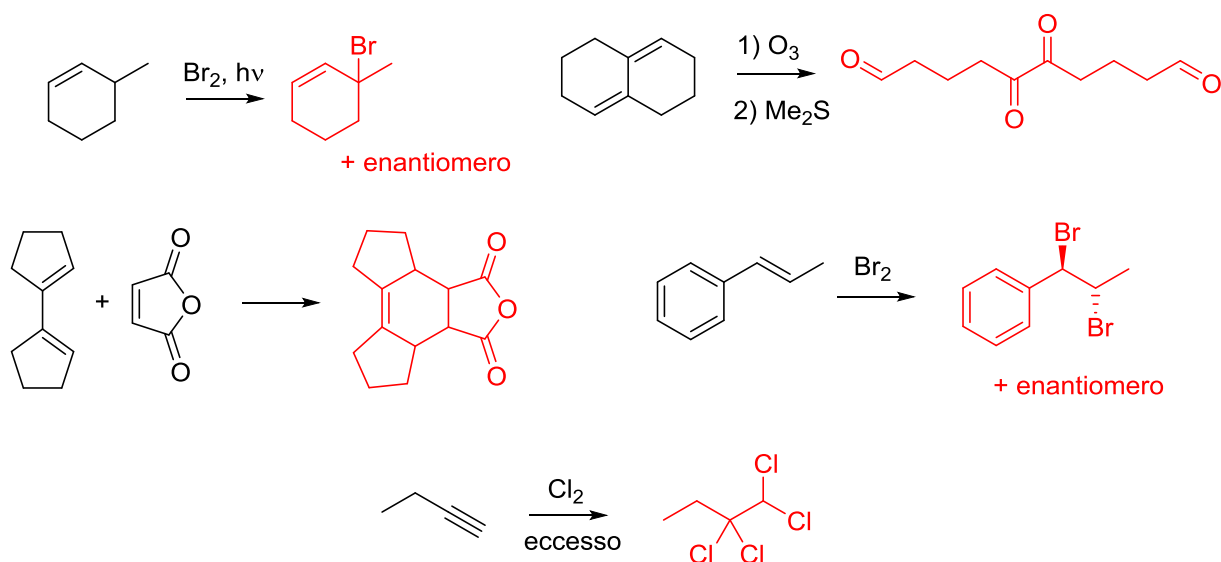
3) Stabilire se, nella conformazione più stabile delle seguenti molecole, il gruppo indicato dalla freccia è assiale o equatoriale.



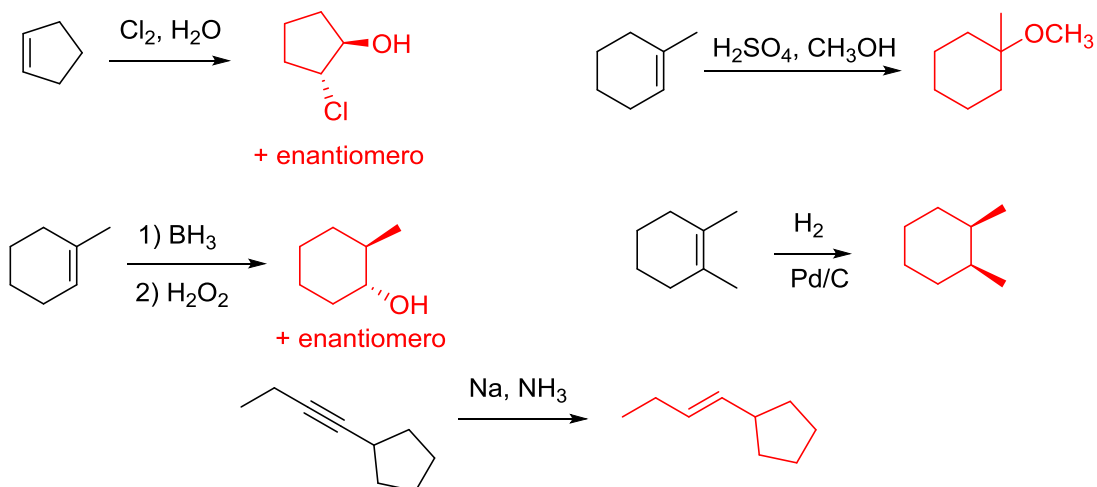
4) Ordinare in ordine di stabilità crescente i seguenti carbocationi. Nel caso in cui è possibile scrivere le forme di risonanza



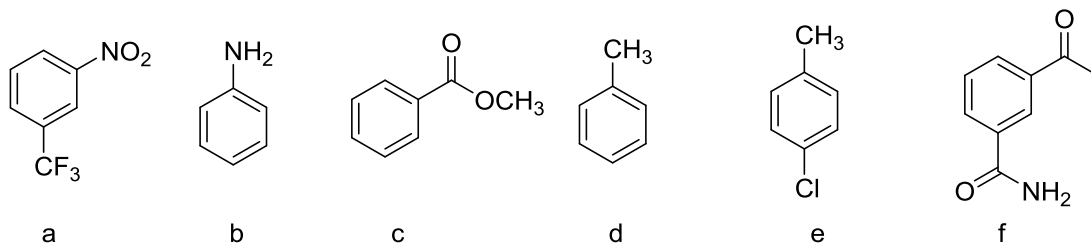
5) Completare le seguenti reazioni indicando la struttura dei prodotti e la stereochimica quando rilevante.



6) Scrivere i prodotti principali delle seguenti reazioni indicandone la stereochimica quando rilevante

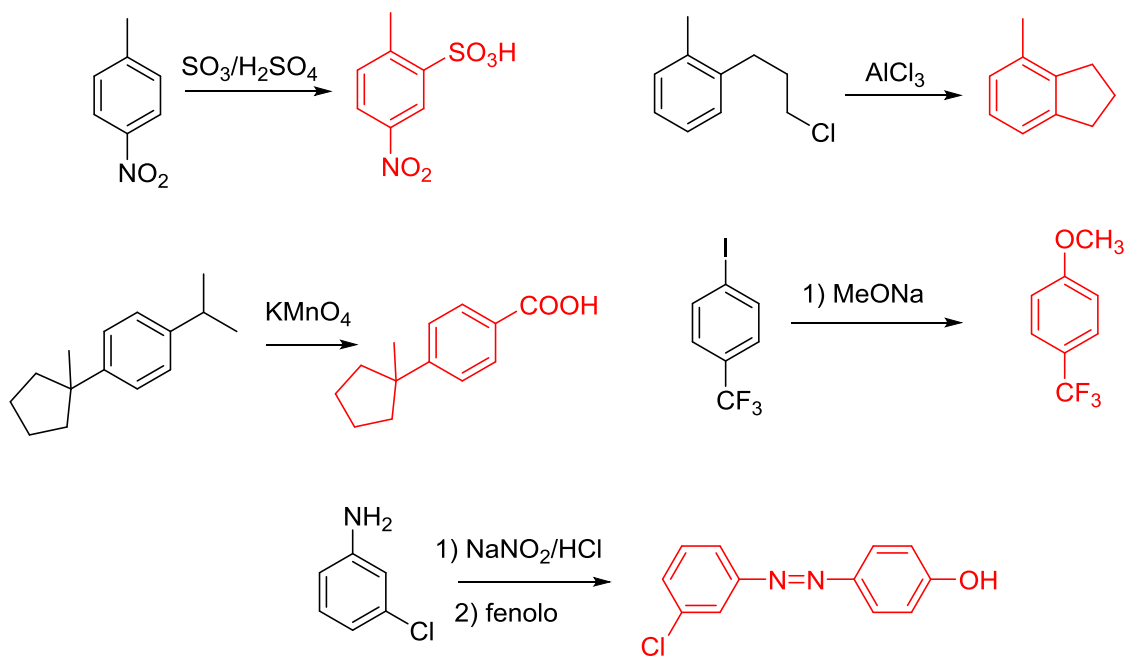


7) In una reazione di sostituzione elettrofila aromatica, ordinare in ordine di reattività crescente i seguenti substrati. Nel caso della molecola **b** dire se è orto/para o meta orientante e giustificare l'effetto di orientazione con le opportune formule di risonanza

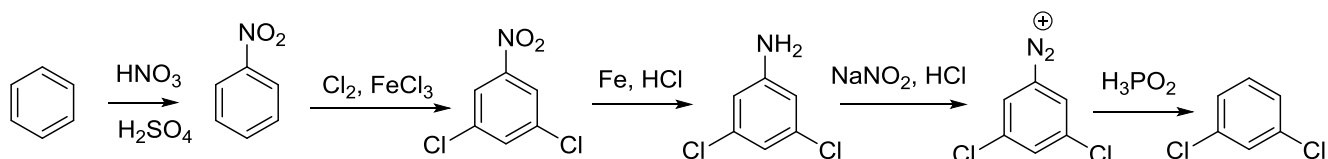


$a < f < c < e < d < b$

8) Scrivere i prodotti principali delle seguenti reazioni:



9) Proporre una sintesi del *m*-diclorobenzene a partire dal benzene



10) L'1-esanolo può essere ottenuto in tre passaggi da acetilene e un alogenuro alchilico. Indicare come.

