

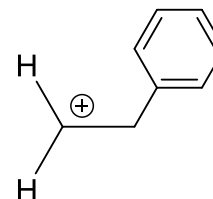
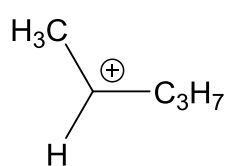
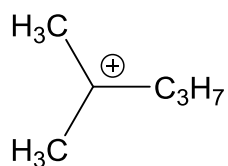
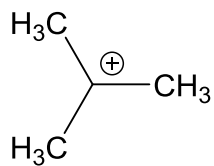
1) Classificare questi composti per ordine crescente di stabilità

A

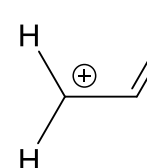
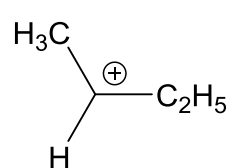
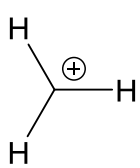
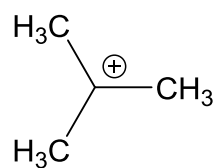
B

C

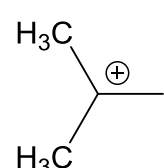
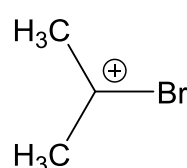
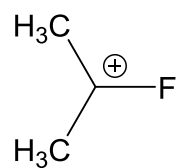
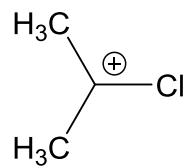
D



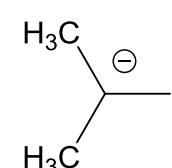
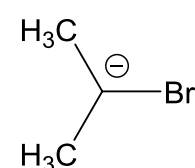
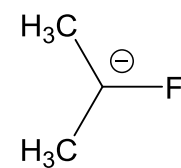
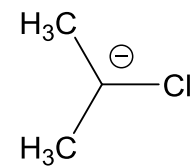
D < C < A e B



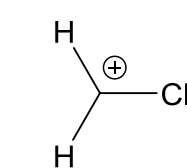
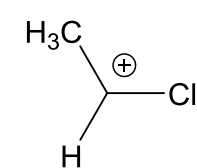
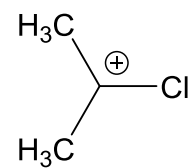
B < C e D < A



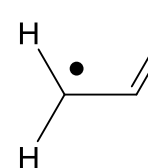
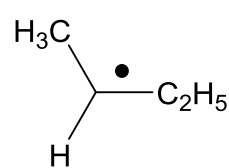
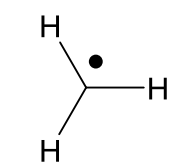
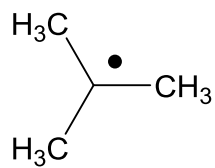
B < A < C < D



D < C < A < B

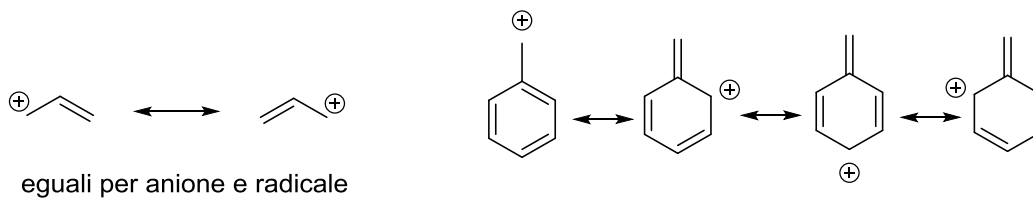


C < B < A

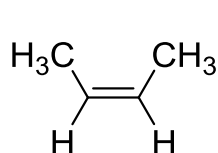


B < C e D < A

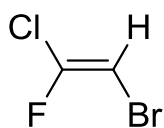
3) Scrivere le forme di risonanza di un catione allilico, di un radicale allilico, di un anione allilico e di un catione benzilico



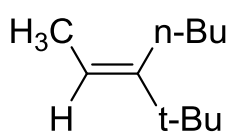
2) Assegnare la stereochimica dei seguenti composti con i descrittori E/Z e quando possibile con cis/trans (si può utilizzare la nomenclatura cis/trans quando la stereochimica viene definita in modo univoco prendendo come riferimento la catena principale di atomi di carbonio).



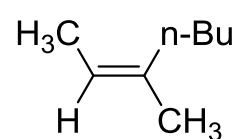
Z (cis)



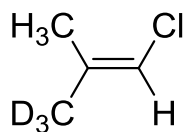
E



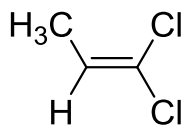
E (cis)



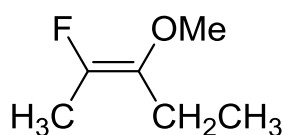
Z (trans)



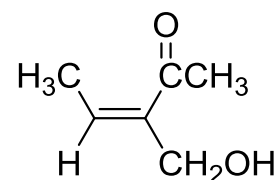
E



non esiste isomeria

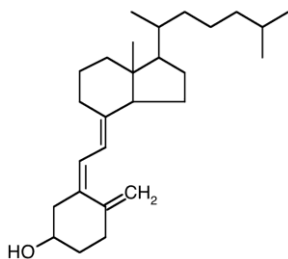


Z (cis)

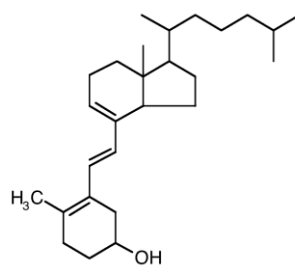


Z (cis)

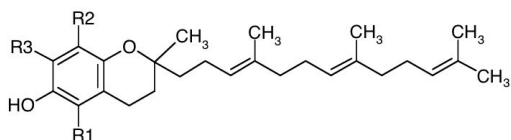
3) Individuare le funzioni olefiniche (doppi legami) non aromatici nelle seguenti molecole e indicarne la stereochimica.



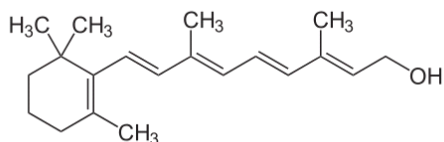
Vitamina D (coleciferolo)



Vitamina D (tachisterolo)

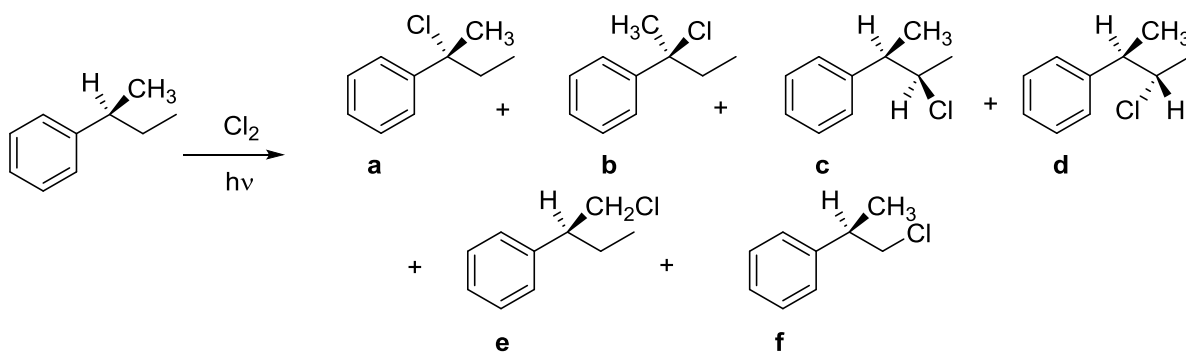


Vitamina E (tocotrienoli)



Vitamina A (retinolo)

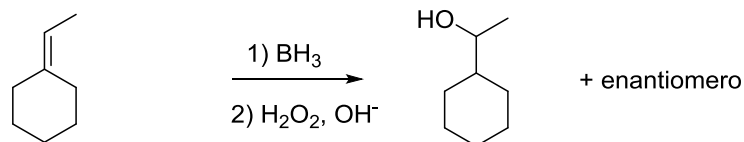
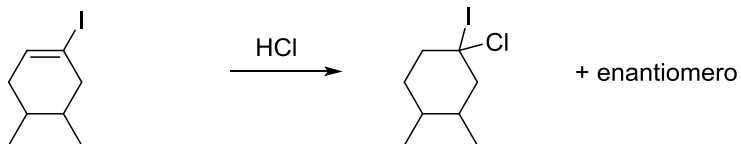
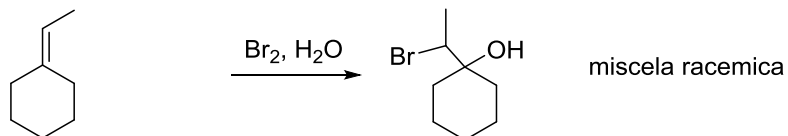
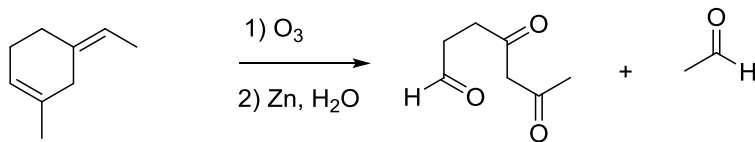
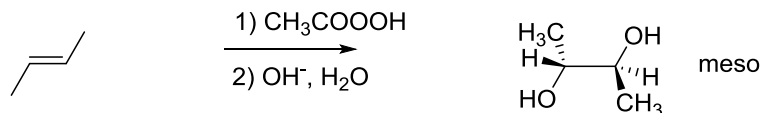
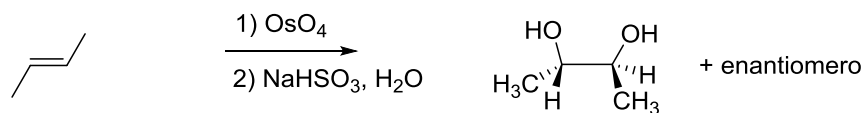
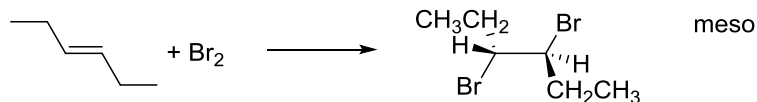
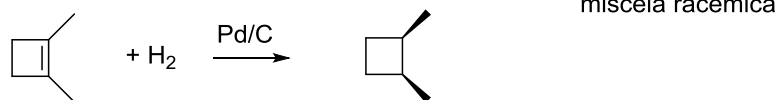
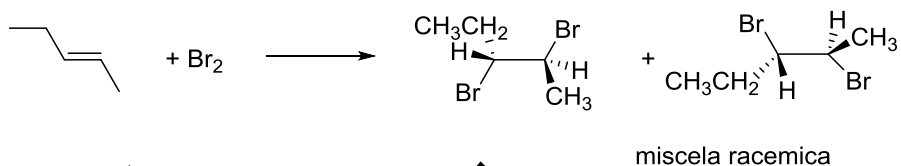
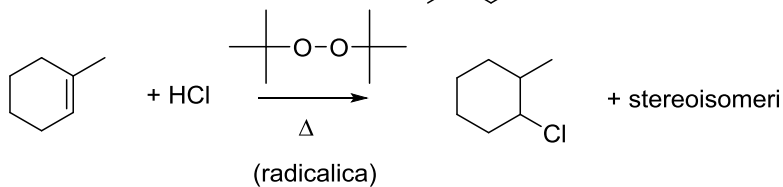
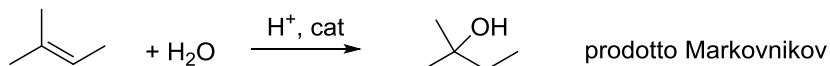
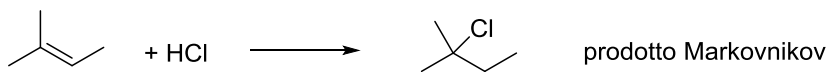
4. Ordinare in ordine decrescente d'abbondanza i prodotti derivati dalla reazione di monoclorurazione radicalica del 2(S)-fenil-butano e indicare le proporzioni relative degli stereoisomeri che si formano.



$$a = b > c \neq d > e = f$$

i prodotti **c** e **d** si formano in quantità diverse perché sono diastereoisomeri

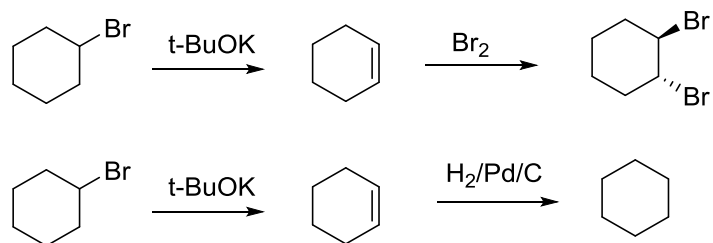
5. Disegnare il prodotto maggioritario delle seguenti reazioni indicando la stereochimica quando rilevante



6) Proporre una via sintetica per preparare i seguenti composti a partire da bromocicloesano:

a) trans-1,2-dibromocicloesano

b) cicloesano



7) Proporre una via sintetica per effettuare la seguente trasformazione

