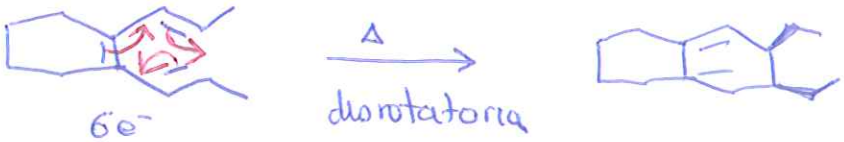
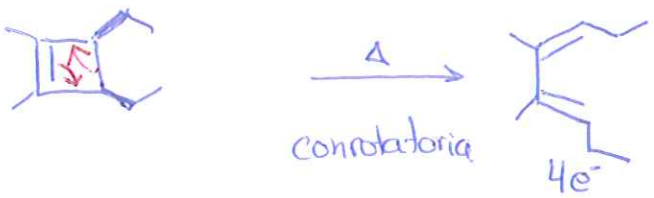
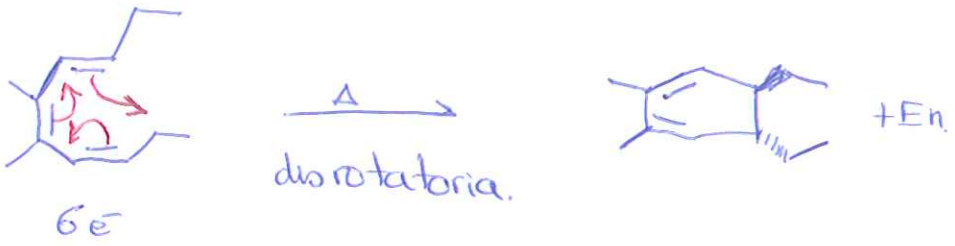
(1) Reazioni elettrocicliche per via termica
Il prodotto e il reagenti si differenziano in 1 legame σ e 1 legame π.

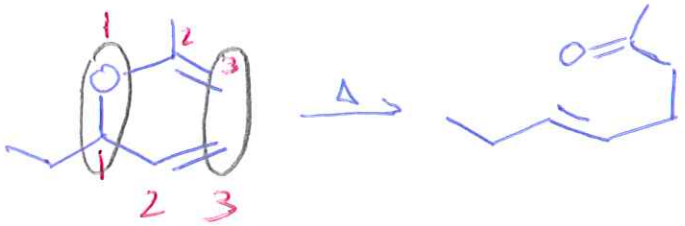
	Δ	$h\nu$
$4e^-$	conrotatoria	disrotatoria
$6e^-$	disrotatoria	conrotatoria

a) 

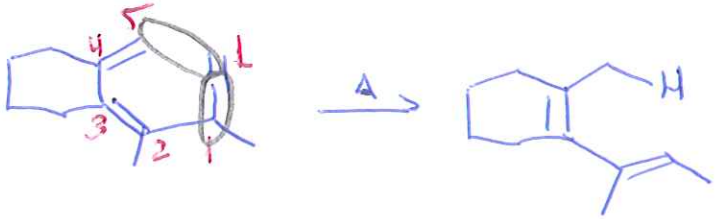
b) 

c) 

(2) a) Reazioni sigmatropiche. Nomenclatura: contare il numero di atomi che separa il legame che si forma da quello che si rompe



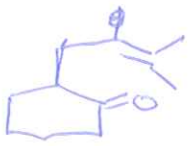
[3,3] sigmatropica
Trasposizione di Claisen
(allyl vinyl etere)



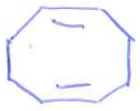
[1,5] sigmatropica con spostamento di idrogeno

Nota: nelle trasposizioni sigmatropiche reagente e prodotto hanno lo stesso numero di legami π e σ

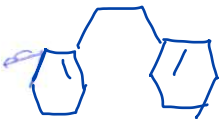
(3)

a. 

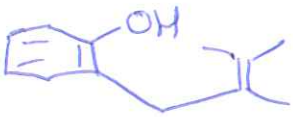
Trasposizione di Claisen [3,3] sigmatropica

b. 

Trasposizione di Cope, [3,3] sigmatropica
(2 doppi legami separati da 3 legami σ)

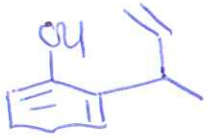
c. 

Trasposizione di Cope

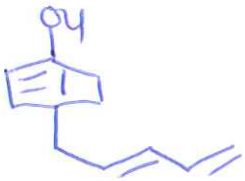
d. 

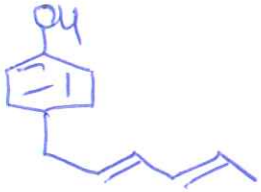
Trasposizione di Claisen

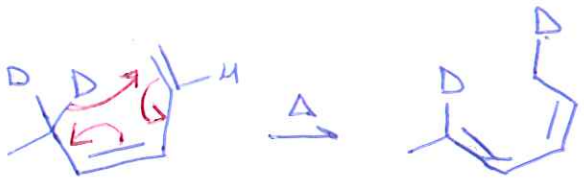
(4) Trasposizione [1,3] sigmatropica con spostamento di carbonio avviene con inversione della configurazione si forma il prodotto A

(5) a. 

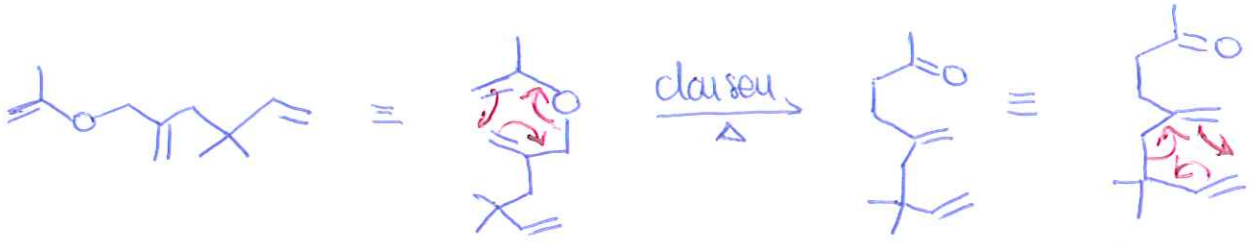
b. 

c. 

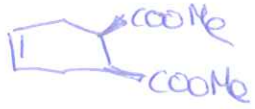
d. 

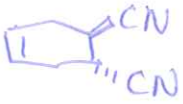
(6) a) 

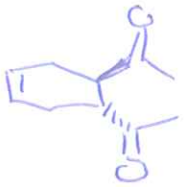
[1,5] sigmatropica

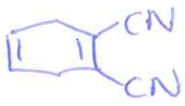
b) 

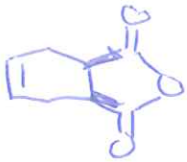
(7)

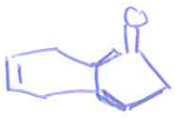
a. 

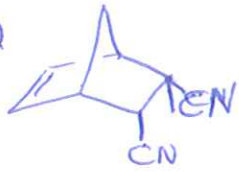
b  + En.

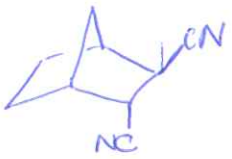
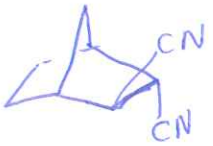
c)  + En

d. 

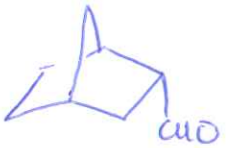
e. 

f. 

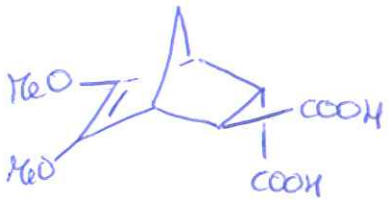
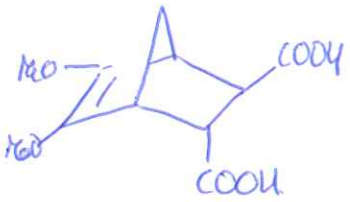
(8) a)  Endo-cis

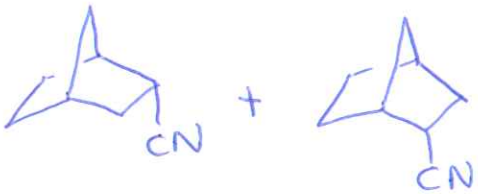
b.  +  enantiomers

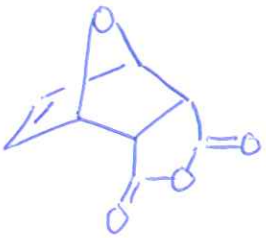
trans

c.  +  enantiomers

endo

d  +  enantiomers

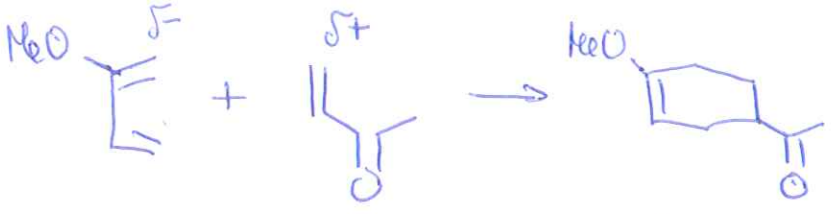
e.  enantiomers

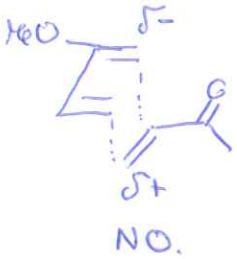
f.  ENDO

9.

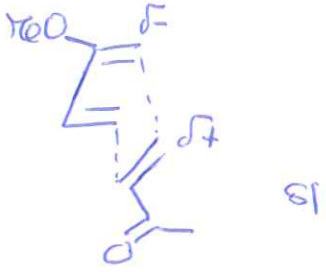
diene ricco in elettroni

dienofilo povero in elettroni





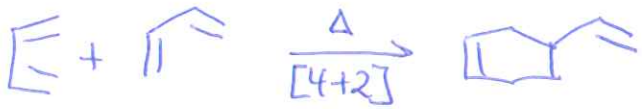
NO.



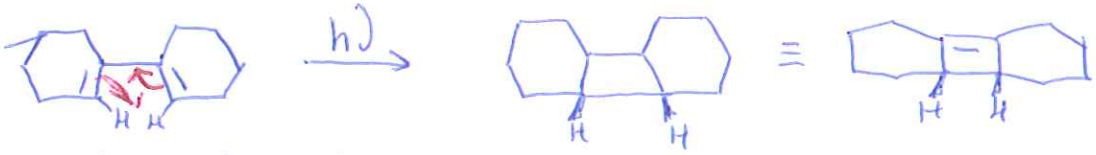
SI

10

a.)



b.)

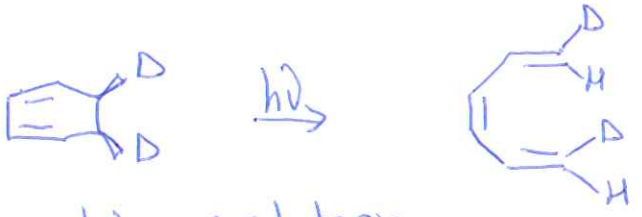


4e⁻, hν ⇒ disrotatoria ⇒ cis.

c.

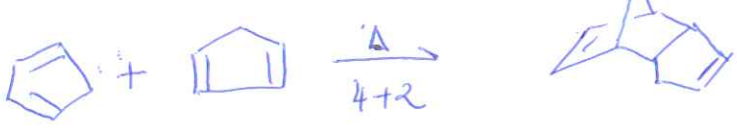
4e⁻ termica conrotatoria

e.



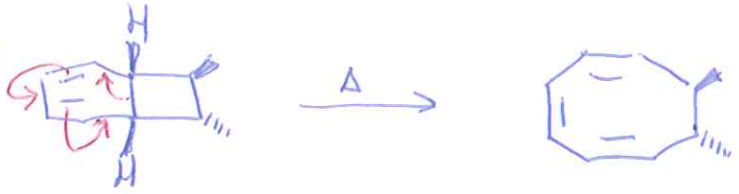
6e⁻, hν, conrotatoria

d.

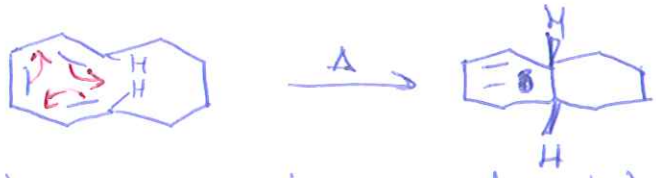


f. 

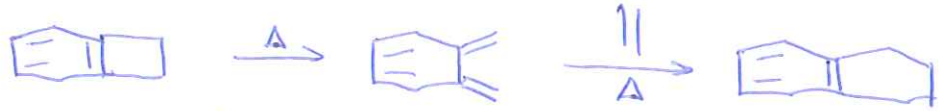
[3,3] sigmatropica

g. 

apertura di anello, 6e⁻ H termica, disrotatoria

h. 

chiusura 6e⁻ termica disrotatoria

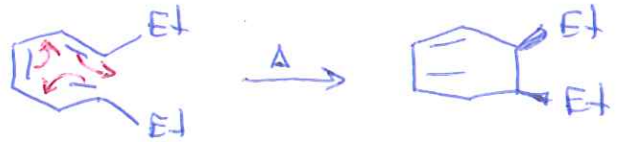
(11) 

elettrociclica Diels Alder

(12) Isomeri dello stesso composto. Reazione elettrociclica

6 e⁻ termica disrotatoria

6e⁻ fotochimica conrotatoria

a) 

forma meso

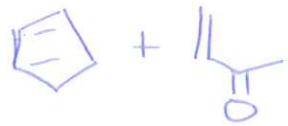
b) 

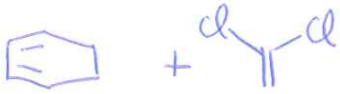
c) 

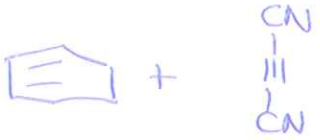
d) 

meso

(3)

a) 

b. 

c. 

d.