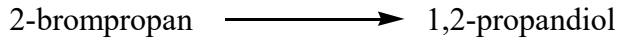
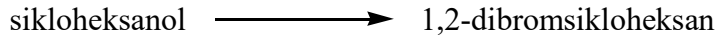


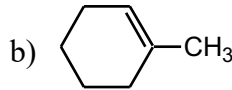
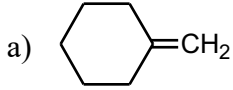
ALİŞTİRMA SORULARI (Alkenler ve Alkinler)

1- C₃H₄ molekül formülüne sahip bütün izomer hidrokarbonların yapı formüllerini yazıp adlandırınız.

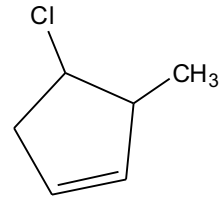
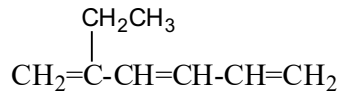
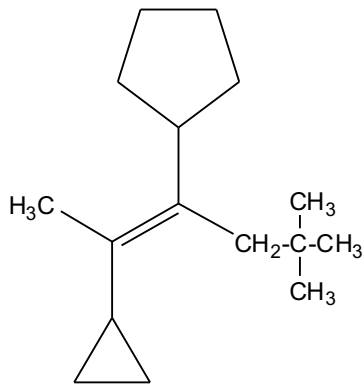
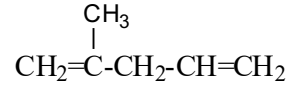
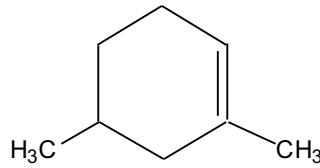
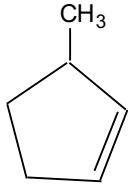
2- Aşağıdaki sentezlerin akış denklemlerini yazınız.



3- Aşağıdaki alkenleri, uygun alkol yada alkil halojenürlerden çıkararak ve gerekli diğer reaktifleri kullanarak nasıl sentezlersiniz?



4- Aşağıda yapı formülleri verilen alkenleri, IUPAC-sisteminde adlandırınız.



5- Aşağıda adları verilen alkenlerin yapı formüllerini yazınız.

a) 2-metil-2-penten

b) 4,5-dimetilsikloheksen

c) cis-2,3-diklor-2-penten

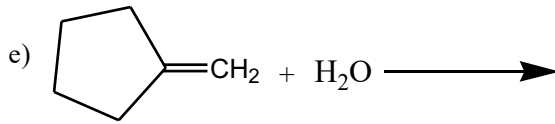
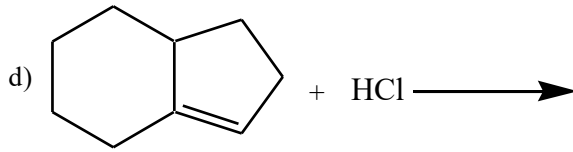
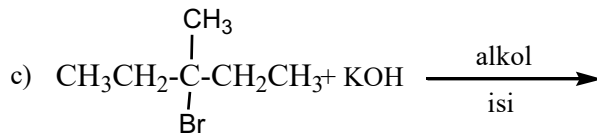
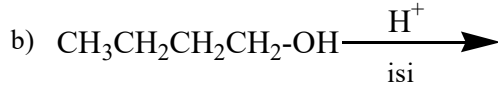
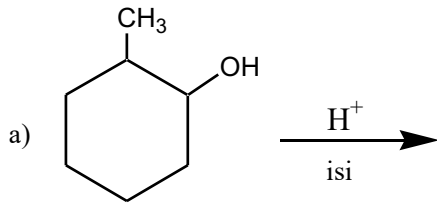
d) vinil alkol

e) alil bromür

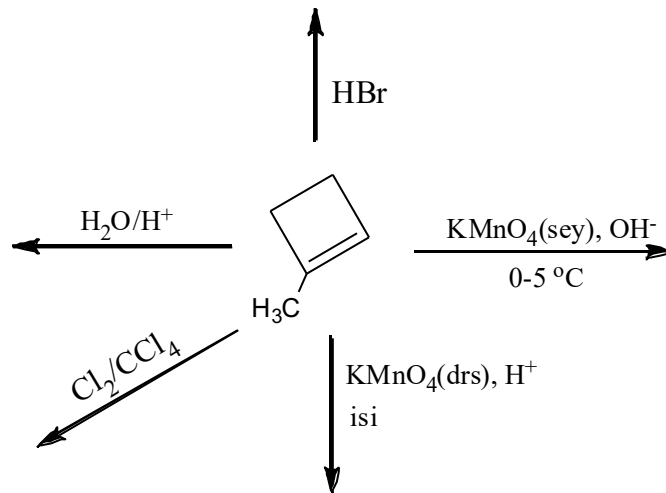
f) metilensiklopentan

g) cis-5-klor-4-etil-4-metil-2-heksen

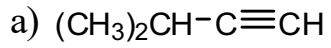
6- Aşağıdaki reaksiyonları tamamlayınız.



7- 1-Metilsiklobuten'in aşağıdaki reaktiflerle reaksiyonlarında oluşacak ürünlerin yapı formüllerini yazınız.



8- Aşağıda yapı formülleri verilen alkinleri, IUPAC-sisteminde adlandırınız.



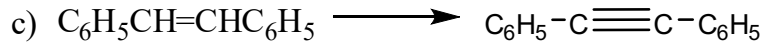
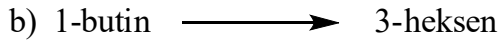
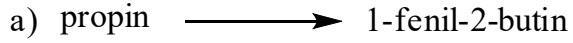
9- Aşağıda adları verilen alkinlerin yapı formüllerini yazınız.

a) 2-pentin

b) difenil asetilen

c) 1-fenil-2-butin

10- Aşağıdaki sentezlerin akış denklemlerini yazınız.



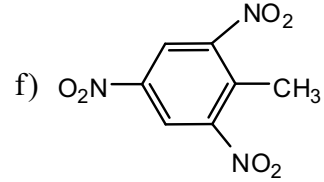
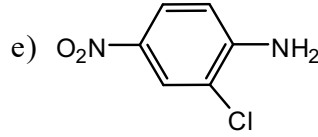
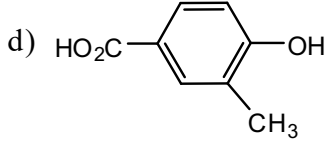
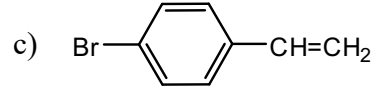
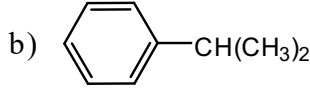
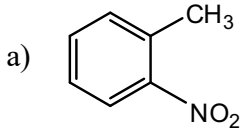
ALIŞTIRMA SORULARI (Aromatik Bileşikler)

1- Aşağıda adları verilen süstitüe benzen bileşiklerinin yapı formüllerini yazınız.

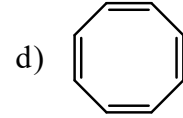
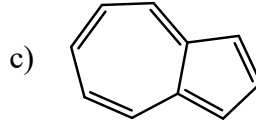
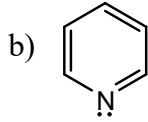
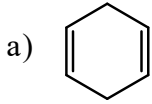
- a) p-diklorbenzen b) o-bromfenol c) p-kloranilin d) m-dinitrobenzen
e) 3,4-dikloranisol f) izo-butilbenzen

2- Dibromtoluenlerin bütün izomerlerinin yapı formüllerini ve adlarını yazınız.

3- Aşağıda yapı formülleri verilen bileşikleri adlandırınız.



4- Aşağıdaki bileşiklerin aromatik olup olmadıklarını tartışınız.

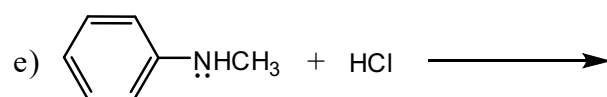
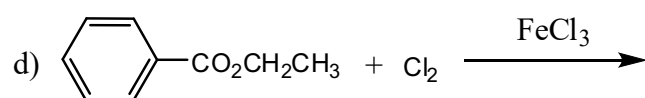
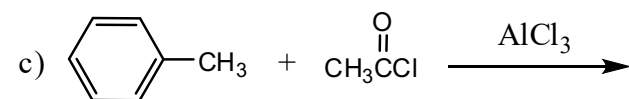
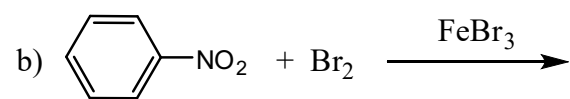
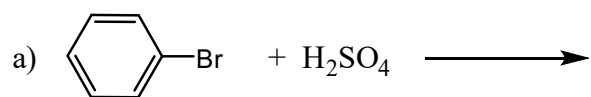


5- İçinde, benzen, 1-heksen yada *n*-heksan olduğu düşünölen bir kapta bunlardan hangisinin olduğu hangi basit kimyasal tepkime ile anlaşılır? İlgili reaksiyon denklemlerini yazınız.

6- Benzenden çıkarak ve gerekli diđer bileşikleri kullanarak aşağıdaki bileşikleri nasıl sentezlersiniz?

- a) klorbenzen b) *n*-butilbenzen c) etil fenil keton d) *p*-toluensülfonik asit
e) *m*-bromnitrobenzen f) *o*-nitrobenzoik asit

7- Aşağıdaki reaksiyonları tamamlayınız. Oluşması muhtemel bütün ürünlerin formüllerini yazınız.

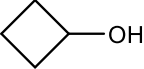
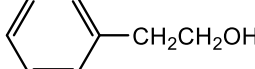


ALİŞTİRMA SORULARI (Alkoller ve Eterler)

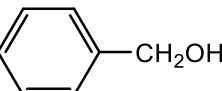
1- Aşağıda adları verilen alkollerin yapı formüllerini yazınız.

- a) 3-fenil-1-propanol b) siklopentanol c) *izo*-butil alkol
d) *trans*-3-metilsikloheksanol

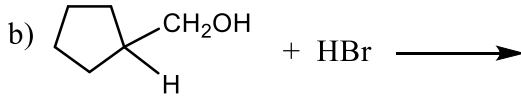
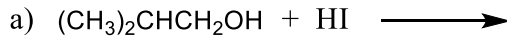
2- Aşağıda yapı formülleri verilen alkolleri adlandırınız.

- a) $\text{CH}_3\overset{\text{OH}}{\text{CH}}\text{CH}_3$ b) $\text{CH}_3\overset{\text{CH}_3}{\text{CH}}\text{CH}_2\text{CH}_2\text{OH}$ c)  d) 

3- Aşağıdaki alkolleri; a) yerdeğiştirme, b) Grignard bileşikleri kullanılarak ve c) karbonil bileşiklerinin indirgenmesi ile nasıl sentezlenebileceklerini gösteriniz?

- a) $\text{CH}_3\text{CH}_2\overset{\text{OH}}{\text{CH}}\text{CH}_3$ b) 

4- Aşağıdaki tepkime denklemlerini tamamlayınız.



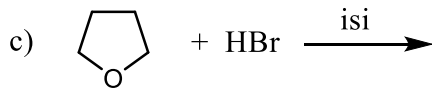
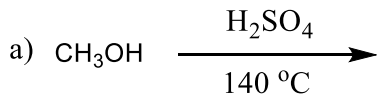
5- Aşağıdaki bileşiklerin sentezi için bir alkol ve bir yükseltgen madde öneriniz.

- a) 2-butanon b) butanoik asit c) siklopentanon d) 1,3-dibrompropan

6- Aşağıda adları verilen eterlerin formüllerini yazınız.

- a) *sec*-butil fenil eter b) *tert*-butil metil eter c) divinil eter

7- Aşağıdaki reaksiyon denklemlerini tamamlayınız.



8- Aşağıda adları verilen eterleri, Williamson eter sentez yöntemi ile nasıl sentezlersiniz? İlgili reaksiyon denklemlerini yazınız.

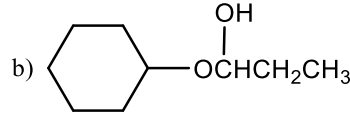
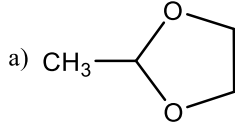
- a) etil *izo*-propil eter b) *tert*-butil etil eter

ALİŞTIRMA SORULARI (Aldehitler ve Ketonlar)

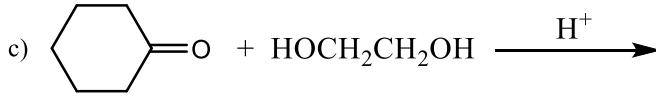
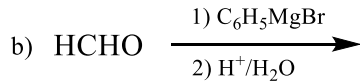
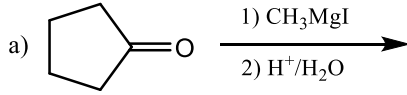
1- Aşağıda adları verilen bileşiklerin yapı formüllerini yazınız.

- a) 2-fenilpropanal b) 1,3-siklopentandion c) metil vinil keton
d) β -hidroksibutiraldehit e) 4-metil-2-heksanon f) sikloheptanon

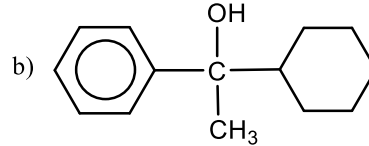
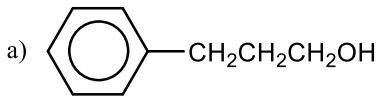
2- Aşağıdaki bileşikleri tanımlayınız ve hangi bileşiklerden çıkılarak sentezlenebileceğini, reaksiyon denklemini de yazarak gösteriniz.



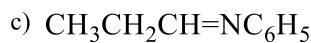
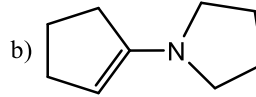
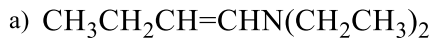
3- Aşağıdaki tepkimelerde oluşacak ana organik ürünler nelerdir? Formüllerini yazınız.



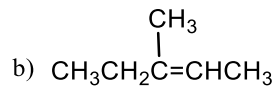
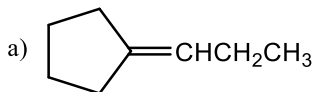
4- Aldehit ve ketonlardan çıkarak ve uygun *Grignard bileşiklerini* kullanarak aşağıdaki alkoller nasıl sentezlersiniz? İlgili reaksiyon denklemlerini yazınız ve varsa birden fazla sentez yolu, hepsini cevaplayınız.



5- Aşağıdaki *sübstitüe imin* ve *enaminleri* altı yada daha az sayıda karbonu olan aldehit yada ketonlardan çıkarak nasıl sentezlersiniz?



6- Aşağıdaki dönüşümleri *Wittig-tepkimesini* uygulayarak nasıl gerçekleştirirsiniz?



7- Siklopentanon'un ařađıdaki reaktiflerle tepkime ürünlerini tahmin ediniz. İlgili reaksiyon denklemlerini yazınız.

a) NaBH_4 , sonra $\text{H}^+/\text{H}_2\text{O}$

b) fenilhidrazin ve H^+

c) $(\text{CH}_3)_2\text{CHMgBr}$, sonra $\text{H}^+/\text{H}_2\text{O}$

d) $(\text{C}_6\text{H}_5)_3\text{P}=\text{CHCH}_3$