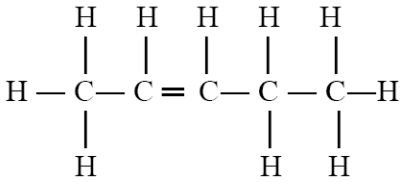
Naming and Drawing Alkenes Worksheet and Key

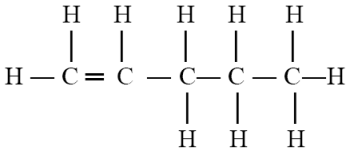
1) Draw and name the ***cis*** and ***trans*** condensed structure of:



cis condensed structure:	***trans*** condensed structure:
name:	name:

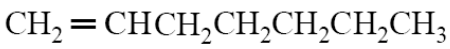
2. Name the following alkenes (include cis- or trans- for the alkenes that when appropriate)

a)



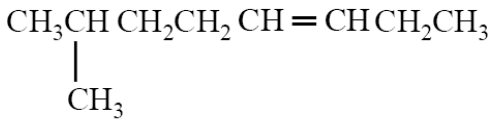
Name: _____

b)



Name: _____

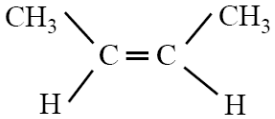
c)



Name: _____

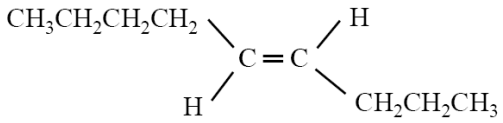
Be careful to correctly identify carbon #1……

d)



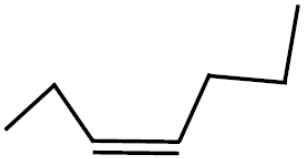
Name: _____

e)



Name: _____

f)



Name: _____

3. Draw the line bond, condensed, and skeletal structure of the following alkenes.

a) 1-hexene

line-bond structure	condensed structure	skeletal structure

b) 4-isopropyl-2-methyl-1-nonene

line-bond structure	condensed structure	skeletal structure

c) cis-2-hexene

line-bond structure	condensed structure	skeletal structure

d) trans-2-pentene

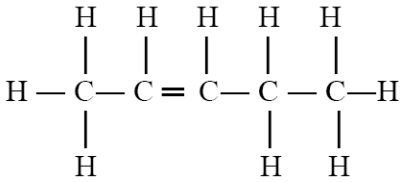
line-bond structure	condensed structure	skeletal structure

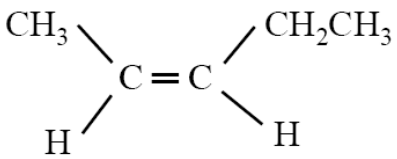
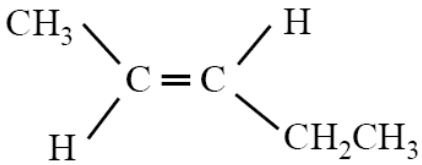
e) cis-2-methyl-3-hexene

line-bond structure	condensed structure	skeletal structure

Key

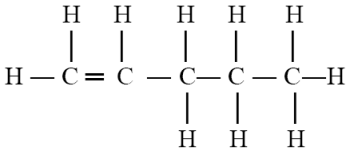
1) Draw and name the ***cis*** and ***trans*** condensed structure of:



cis condensed structure:	***trans*** condensed structure:
	
name: *cis*-2-pentene	name: *trans*-2-pentene

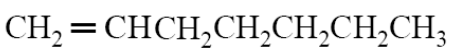
2. Name the following alkenes (include cis- or trans- for the alkenes that when appropriate)

a)



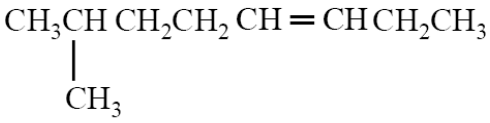
Name: ____1- pentene_____

b)



Name: ___1- heptene_____ _____

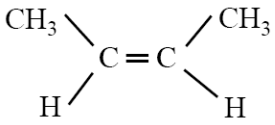
c)



Name: ____7- methyl-3-octene_____

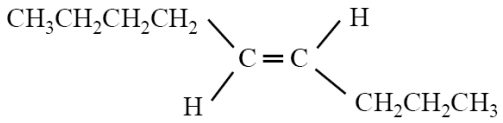
Note: Carbon #1 is the carbon nearest to the double bond

d)



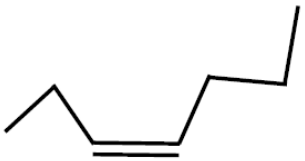
Name: _____*cis*-2-butene _____

e)



Name: _____*trans*-4-nonene _____

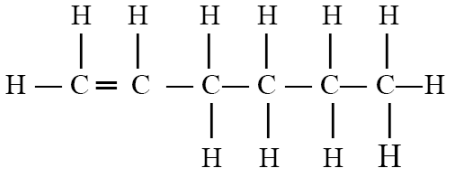
f)



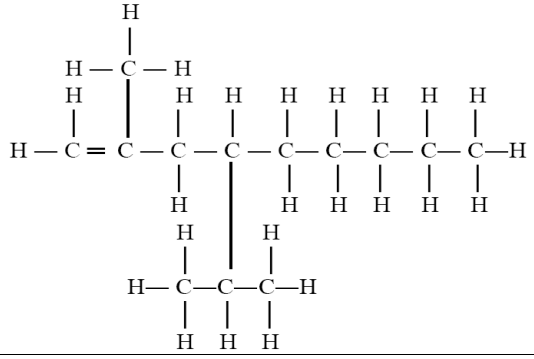
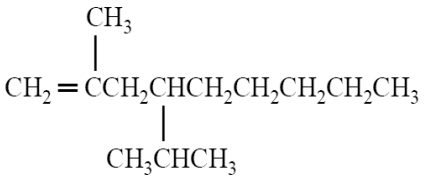
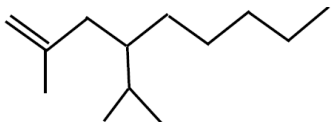
Name: _____cis-3-heptene _____

3. Draw the line bond, condensed, and skeletal structure of the following alkenes.

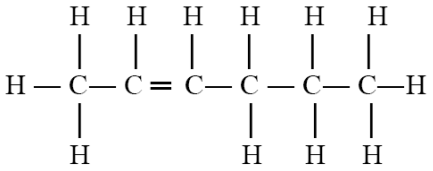
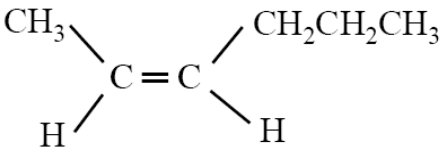
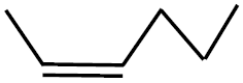
a) 1-hexene

line-bond structure	condensed structure	skeletal structure
	$CH_2=CHCH_2CH_2CH_2CH_3$	

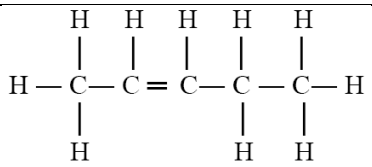
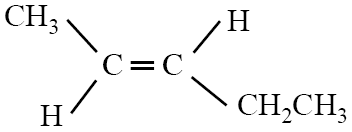
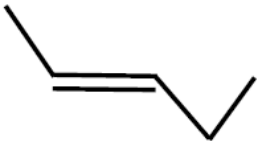
b) 4-isopropyl-2-methyl-1-nonene

line-bond structure	condensed structure	skeletal structure
		Note: There are several correct ways to draw many of these skeletal structures. 

c) *cis*-2-hexene

line-bond structure	condensed structure	skeletal structure
 Note: cis/trans is not displayed in line-bond structures (only displayed in condensed and skeletal structures).		

d) *trans*-2-pentene

line-bond structure	condensed structure	skeletal structure
 Note: cis/trans is not displayed in line-bond structures (only displayed in condensed and skeletal structures).		

e) *cis*-2-methyl-3-hexene

line-bond structure	condensed structure	skeletal structure