

Lesson 5 - The Alkenes

Learning Intentions:

By the end of this lesson, I will be able to...

- ★ State the defining feature of the Alkenes
- ★ State the name endings for the Alkene's
- ★ Name and draw the smallest alkene molecule.
- ★ Give the molecular, structural and full structural formula for the Alkenes
- ★ Give the general formula for the Alkenes.

Task 1 - Definition of a homologous series

In the space below, write the definition of a homologous series:

A homologous series is a family of hydrocarbons with:

1. _____
2. _____

And

3. Gradually increasing physical properties.

Thee _____ are an example of a homologous series.

Task 2 - The Alkenes

The _____ is another example of a homologous series.

The alkenes names begin with the same _____

_____ atoms present, like the alkanes.

The alkenes names all end in _____.

The alkenes contain a carbon to _____.

The C=C is known as a _____.

The presence of the C=C in the alkenes results in them being _____.

Task 3

What is the minimum number of carbon atoms that must be present in an alkene?

The minimum number of carbon atoms required to make an alkene is _____.

This is because _____

_____.

The first member of the alkene family is therefore called _____.

Full Structural formula:

Task 4 - Writing the FS, SS and Molecular Formula of Alkenes

Complete the full structural formula, shortened structural formula and molecular formula of the following alkenes along with the video.

Name	Ethene	Molecular Formula	
Full Structural Formula			
Shortened Structural Formula			

Name	Propene	Molecular Formula	
Full Structural Formula			
Shortened Structural Formula			

Name	Butene	Molecular Formula	
Full Structural Formula			
Shortened Structural Formula			

Now complete the full structural, shortened structural and molecular formula for the remaining four alkenes.

Name	Pentene	Molecular Formula	
Full Structural Formula			
Shortened Structural Formula			

Name	Hexene	Molecular Formula	
Full Structural Formula			
Shortened Structural Formula			

Name	Heptene	Molecular Formula	
Full Structural Formula			
Shortened Structural Formula			

Name	Octene	Molecular Formula	
Full Structural Formula			
Shortened Structural Formula			