



Alkenes - Properties

1 2 3 4 5

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.

.

e.g.



The C=C Bond

1 2 3 4 5

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Bond 1

.

.

Bond 2

.

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Overall



Testing for Alkenes

1 2 3 4 5

Qualitative (Yes / No)

Bromine Water -

Test :

Observation :

Positive =

Negative =

e.g.



Geometrical Isomers

1 2 3 4 5

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.

.

Criteria: Molecule must have :

①

②

e.g.

Next Steps

.

.

OR

e.g.

e.g.

or

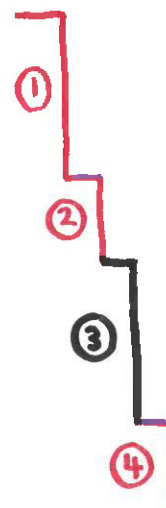


Naming Geometric Isomers (E/Z)

1 2 3 4 5

e.g.

Cahn-Ingold-Prelog System



e.g.

CHEAT



The Cis/Trans System

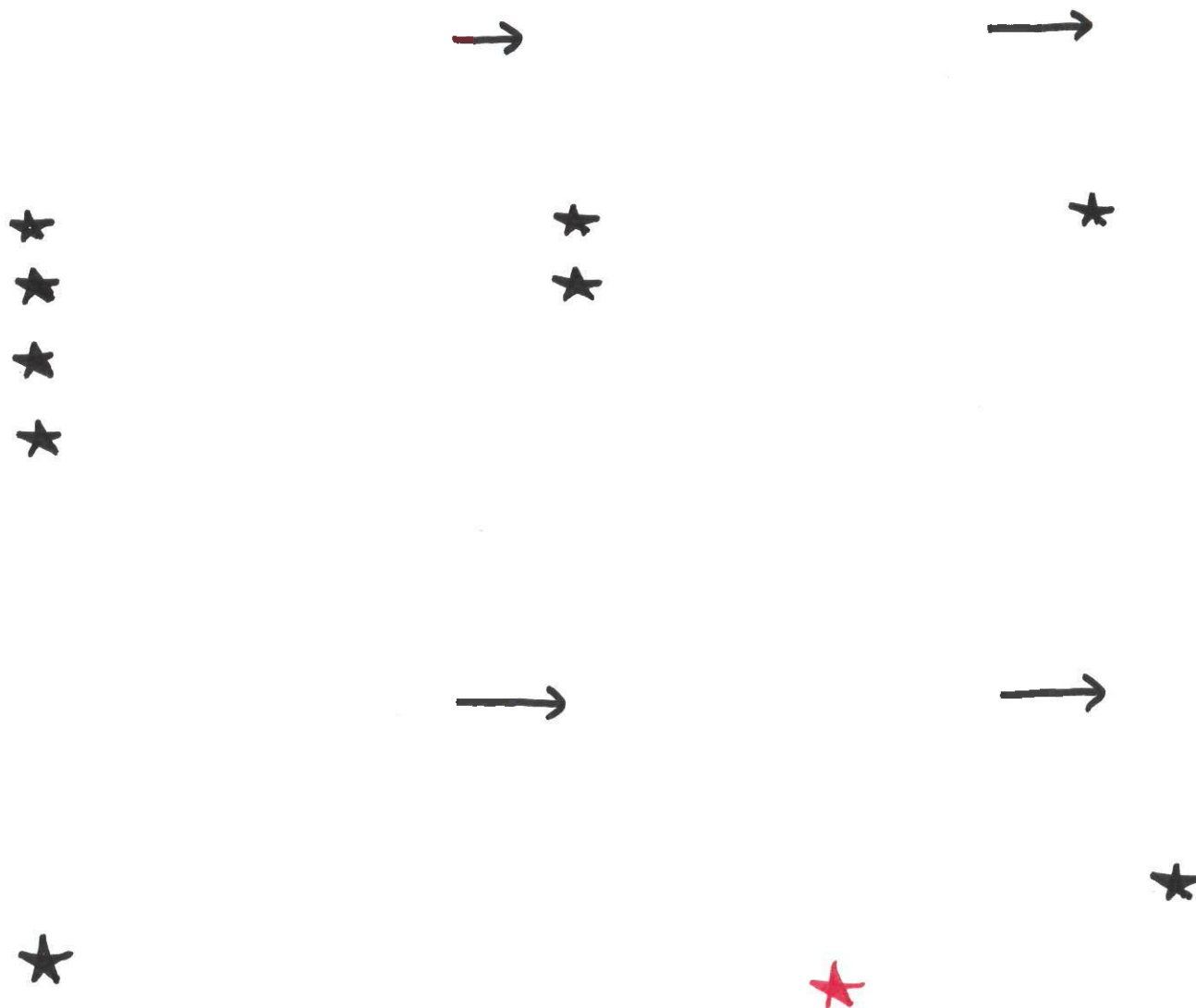
i.e.



Alkene $\rightarrow$ Halogenoalkane

Electrophilic Addition

1 2 3 4 5





Markovnikov's
Rule

Markovnikov's Rule

1 2 3 4 5

Asymmetrical

★ RULE



or



Alkene + conc. H_2SO_4

1 2 3 4 5

Electrophilic Addition



★

★

NB. Markovnikov's Rule
also applies here!

Hydration

+



+

★

★



Alkenes - Hydrogenation & Hydration

1 2 3 4 5

Hydrogenation



e.g.



e.g.

Hydration

e.g.



NB. Markovnikov's Rule applies here! No mechanism needed, but know that the MAJOR PRODUCT....



Hydration of Alkenes- Mechanism

1 2 3 4 5

REAGENT :



NB,,

NB,,



Addition Polymerisation

1 2 3 4 5

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Method -

e.g.



e.g.



Finding the Monomer



Important Facts!

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