

Do now:

Brainstorm what we have learnt in organic chemistry so far...

Polymers

This year we focus on addition polymers, in Level 3 you will learn about condensation polymers.

With your molymods make as many ethene molecules as you can.

With your molymods make as many bromoethene molecules as you can.

With your molymods make as many propene molecules as you can.

Common addition polymers



polyethene



teflon



polyvinylchloride
(PVC)



polypropene



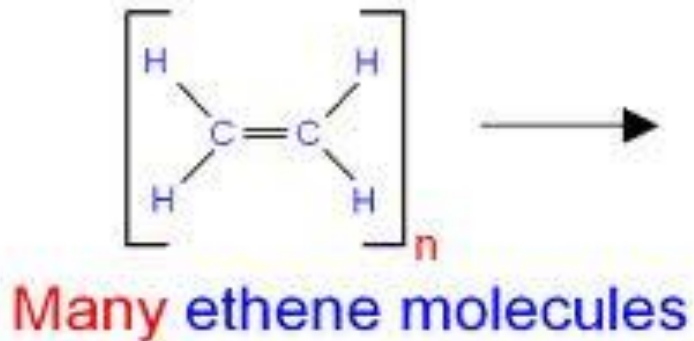
Addition polymers

What is a polymer?

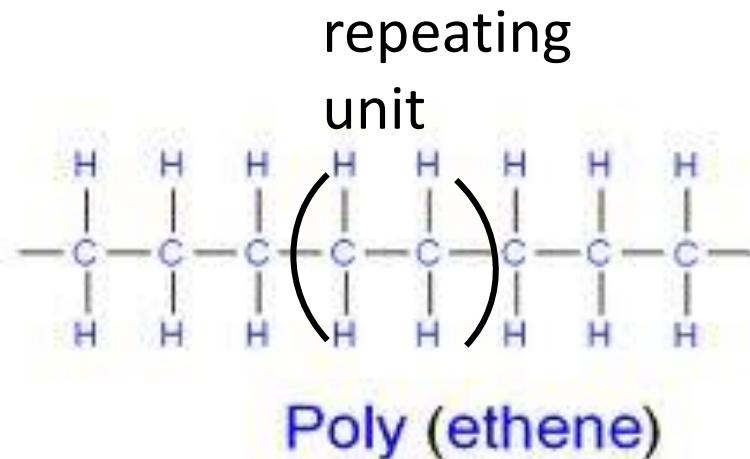
→ many

The polymers we study this year are addition polymers. They are made from monomers that have a alkene functional group.

→ one

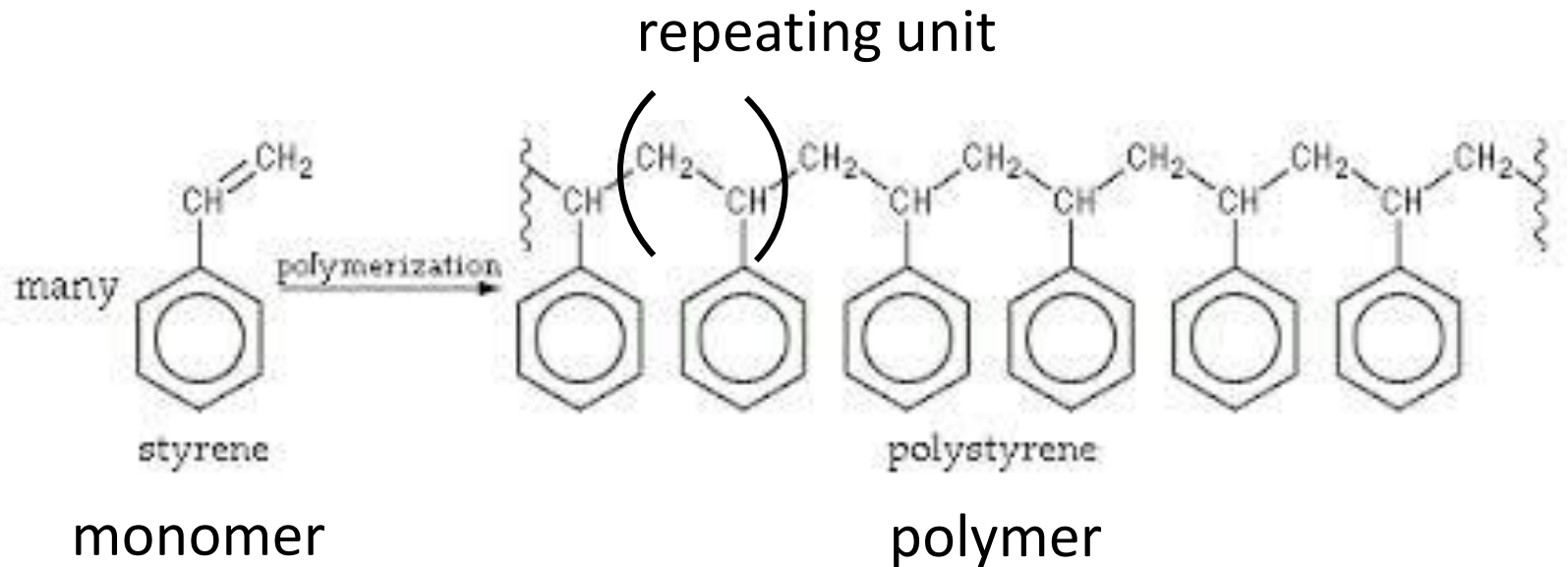


monomer



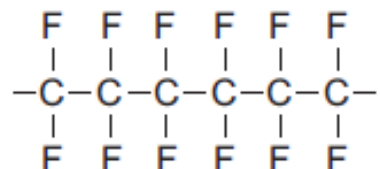
polymer

Addition polymers



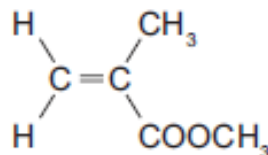
Do now:

- (b) (i) The following diagram shows three repeating sections of a common polymer.



Draw the structural formula of the monomer molecule used to make this polymer.

- (ii) The molecule 2-methyl propenoate, shown below, is the monomer for the polymer commonly known as Perspex.



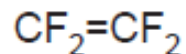
Draw the structural formula of the polymer Perspex showing TWO repeating units.

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SciPad pg 171, 172,
173, 174

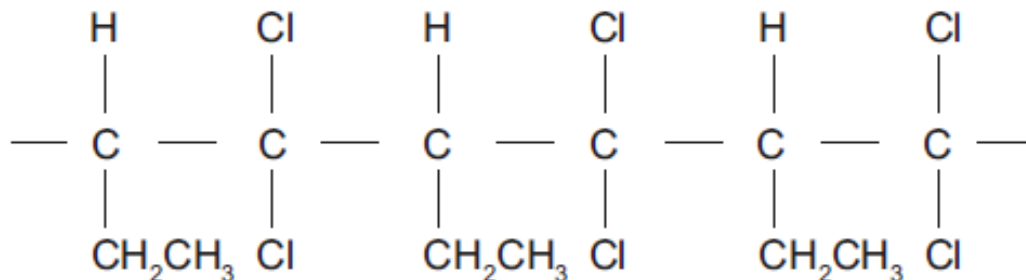
QUESTION TWO

- (a) (i) The molecule tetrafluoroethene, shown below, is the monomer for the polymer commonly known as Teflon.



Draw TWO repeating units for the Teflon polymer in the box below.

- (ii) The following diagram shows three repeating sections of another polymer.

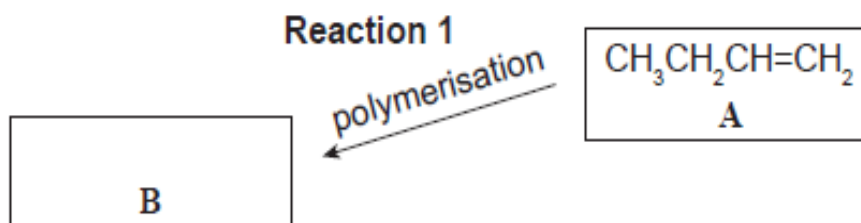


Draw the structural formula of the monomer molecule used to make this polymer.

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QUESTION THREE

But-1-ene is used in the reaction sequence shown below.

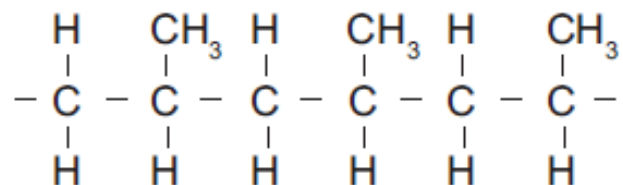


- (a) (i) Draw two repeating units of the polymer, **B**, formed in **Reaction 1**.

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QUESTION TWO

- (a) (ii) The following diagram shows three repeating sections of a polymer.



Draw the structural formula of the monomer molecule used to make this polymer.

