

### Addition polymers

1 a What is meant by the term 'addition polymerisation'?

.....  
..... [1]

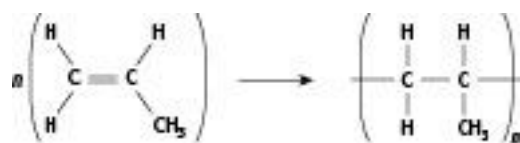
b How does addition polymerisation differ from other types of polymerisation?

.....  
..... [2]

c How does ethene react to form the polymer poly(ethene)? Give an equation using structural formulae. [3]

2 The following equations, A, B and C, show the formation of three different addition polymers.

A



B



**C**



**a** What does the letter 'n' mean in the formula of the product?

.....[1]

**b** Complete the following table by filling in the names of the monomer and polymer in each case, and give **one** use of each of the polymers.

	Name of monomer	Name of polymer	Use of polymer
<b>A</b>			
<b>B</b>			
<b>C</b>			

[3]

**3** Draw the structure of the repeating unit in the following polymers:

a) poly(propene)

b) poly(chloroethene) (PVC)

[2]

**4 a** What common bonding feature must all monomers, whether substituted or not, contain?

.....[1]

b Draw the structure of the addition polymer made from styrene monomers (show at least three repeating units in your structure).

[2]

**TOTAL: \_\_\_/15**