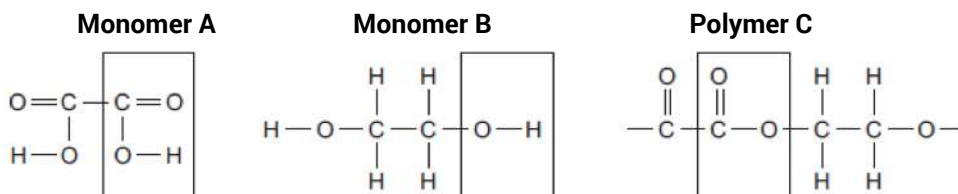


0 1

Monomer **A** and monomer **B** react to form polymer **C**.

The displayed structures of monomer **A**, monomer **B** and a short section of polymer **C** are shown below. The functional group of each structure is shown in a box.



Complete **Table 1** below by writing the names of the functional groups for monomer **A** and polymer **C**.

[2 marks]

0 1

1

Table 1

	Name of functional group
Monomer A carboxylic acid [1]..
Monomer B	alcohol
Polymer C ester [1]

0 2

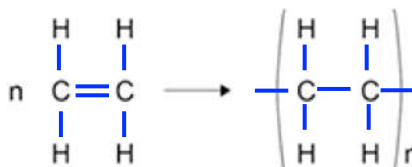
Ethene is used to produce poly(ethene).

0 2

1

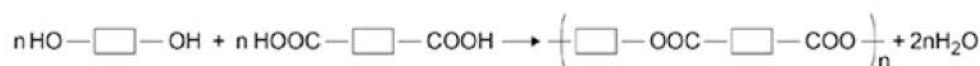
Draw the bonds to complete the displayed formulae of ethene and poly(ethene) in the equation.

[2 marks]



Polyesters are made by a different method of polymerisation.

The equation for the reaction to produce a polyester can be represented as:



0	2	.	2
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Compare the polymerisation reaction used to produce poly(ethene) with the polymerisation reaction used to produce a polyester.

[4 marks]

any four from:

- poly(ethene) produced by addition polymerisation whereas polyester by condensation polymerisation [1]
- poly(ethene) produced from one monomer whereas polyester produced from two different monomers [1]
- poly(ethene) produced from ethene / alkene whereas polyester from a (di)carboxylic acid and a diol / alcohol [1]
- poly(ethene) is the only product formed whereas polyester water also produced [1]
- poly(ethene) repeating unit is a hydrocarbon whereas polyester has an ester linkage [1]

(Total 8 marks)

End