

Solutions

Each answer shows the steps, then the **result**.

2.1

- the small part that is repeated again and again along the polymer chain

2.2

- non-biodegradable (microbes cannot break them down); combustion releases harmful/toxic gases

3.1 B

- The monomer needs a C=C double bond

3.2 B

- Burning PVC releases toxic hydrogen chloride

3.3

(a)

- $-(\text{CH}_2\text{CH}(\text{CH}_3))_n-$ drawn with bonds out at each end

(b)

- chloroethene, $\text{CH}_2=\text{CHCl}$

3.4

- the C–C backbone is strong and unreactive, so microbes/enzymes cannot break it down, and it persists in the environment