Section A

1. What is the definition of a polymer?
   Tick (✓) **one** box.

   A. Repeating units that join together to make a long chain ☐

   B. Small molecules held together by intermolecular forces ☐

   C. A long molecule made up of many repeating units ☐

2. Give the name for repeating units that polymers are made from.

_____

3. What polymer would be made from repeating units of ethene?

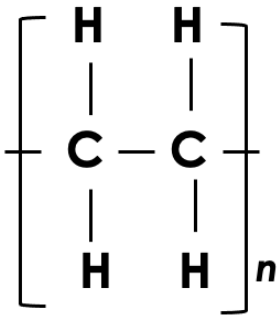
   Tick (✓) **one** box.

   A. poly(propene) ☐

   B. poly(ethene) ☐

   C. poly(ethane) ☐

4. Look at the diagram representing a polymer below.



   a. What does the single straight line in between the H and C represent?

_____

   b. What does the 'n' represent?

_____

Section B

5. What type of bonds are there in a polymer chain?

6. Describe the forces that occur between polymer chains.

7. What type of polymers melt when heated?

8. Draw the molecular formula for a polymer molecule with 50 carbon atoms.

9. Explain why thermosetting polymers are suitable as a material for a saucepan handle.

10. Thermosoftening polymers are used to make plastic bottles and food packing. Explain why thermosoftening polymers would not be suitable for storing hot food.

11. The diagrams below show models for the structures of a thermosetting polymer and a thermosoftening polymer.

Identify which is which and explain why.

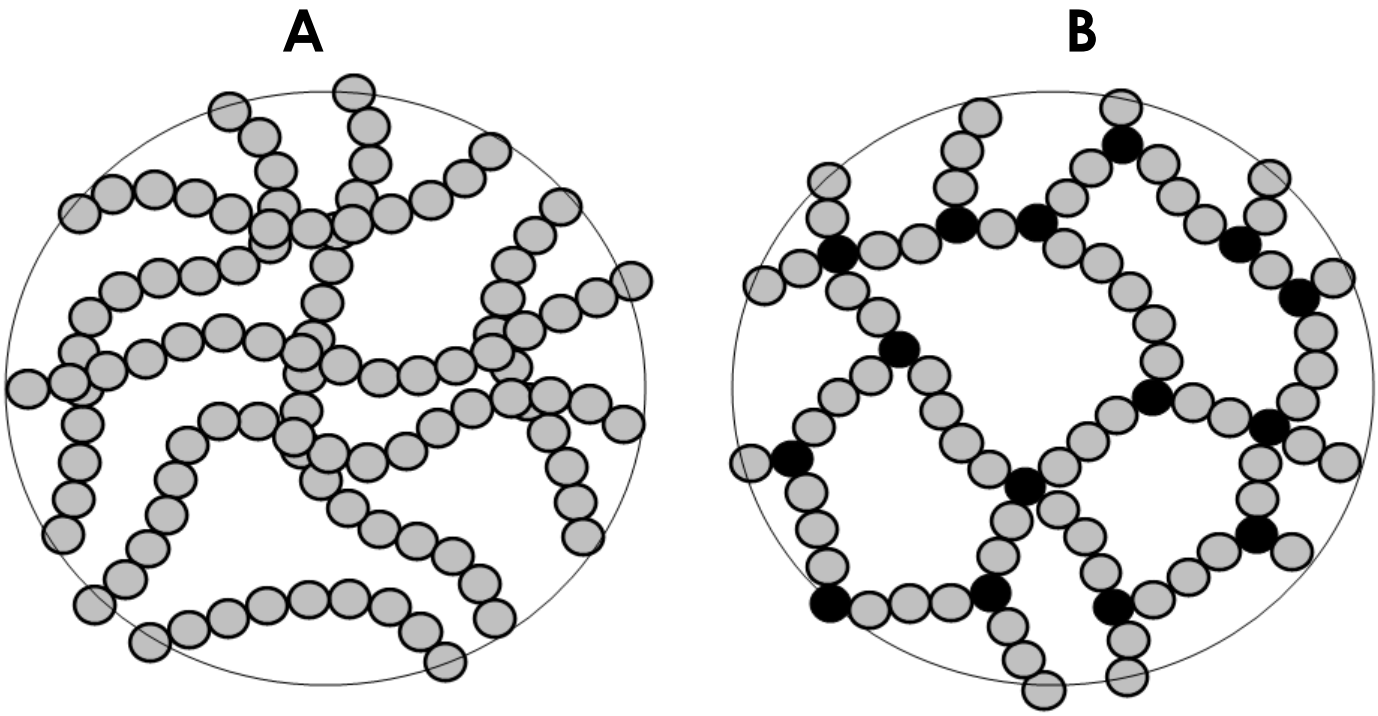


Image from Wikimedia

Section C

12. Carbon dioxide and diamond both contain carbon.

a. Describe the bonding in carbon dioxide.
b. Describe the bonding in diamond.
c. Explain why carbon dioxide is a gas at room temperature but diamond is a solid