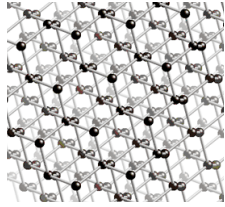
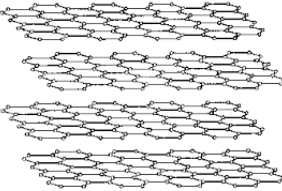
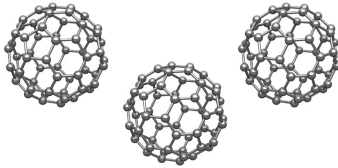
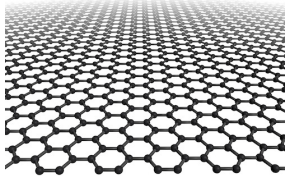




ALLOTROPES OF CARBON

	Diamond	Graphite	Buckminsterfullerene	Graphene	answers
Structure					
Structure type (giant covalent / simple molecular)					
Formula					
Number of covalent bonds each C atom forms					
Melting & boiling points					<ul style="list-style-type: none"> • Not so high • Very high • Very high • Very high
Reason for melting & boiling points					<ul style="list-style-type: none"> • Need to break strong covalent bonds • Need to break strong covalent bonds • Need to break strong covalent bonds • Need to overcome relatively weak forces between molecules (no covalent bonds broken)
Electrical conductivity					<ul style="list-style-type: none"> • Insulator • Insulator • Conductor • Conductor
Reason for electrical conductivity					<ul style="list-style-type: none"> • Has delocalised electrons that can carry charge through structure • Has delocalised electrons that can carry charge through structure • Has delocalised electrons but they cannot move from one molecule to another • Has no delocalised electrons
Strength					<ul style="list-style-type: none"> • Soft and brittle • Soft and brittle • Very strong • Very hard & strong