# Network Solids and Discrete Molecules Worksheet

Scoring guide · one credit per question · review written work against each rubric

## Network Solids and Discrete Molecules

### Question 1

Choice (1)

The covalent bonds connect atoms throughout the solid.

### Question 2

The molecules separate or become mobile as intermolecular attractions are overcome. Their internal covalent bonds can remain intact.

### Question 3

Choice (1)

The formula gives one Si for every two O atoms in the extended structure.

### Question 4

Changing the network disrupts many strong covalent connections through the material. A molecular solid can melt by overcoming attractions between intact molecules.

## Comparing Model Solid Structures

### Question 5

Choice (1)

Only P has an extended structure connected by covalent bonds.

### Question 6

Q contains separate neutral molecules. Weaker attractions between molecules can be overcome at a lower temperature than the extended bonding in P.

### Question 7

Choice (1)

Both are described as melting at high or very high temperatures.

### Question 8

P is held together by an extended covalent network. R has electrostatic attractions between opposite ions in a lattice. The temperature descriptions do not erase the structural difference.