# Quiz 10.4 – Classifying Solids

Name: Key

**Question 1**

Classify the following solids in as many ways as you can:

| Quartz Crystal | Naphthalene | Aluminum Foil | Glass | Iron(III) Oxide |
|---|---|---|---|---|
| crystalline | crystalline | crystalline | amorphous | crystalline |
| covalent network | molecular | metallic | covalent network | ionic |

**Question 2**

For each property or observation, write whether it indicates a solid is amorphous or crystalline

- The atomic-scale structure is chaotic and disordered amorphous
- The solid cleaves easily along flat planes crystalline
- The solid shows flat faces and sharp corners and edges at the macroscopic scale crystalline
- A sharp, consistent melting point is observed crystalline
- The solid grows soft and pliable over a temperature range before finally melting amorphous
- The atomic-scale structure shows a regular, repeating order crystalline

**Question 3**

What types of forces are present in each type of solid?

- Metallic Solids Metallic bonds
- Ionic Solids ionic bonds
- Covalent-Network Solids covalent bonds
- Molecular Solids covalent bonds (internal)
  intermolecular forces (between molecules)