**Periodic Table, Shapes of Molecules and Bonding:**

**Electronegativity and Types of Bonds: Quiz 7a**

Answer the following:

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1. What does it mean to say a bond is polar?
2. Complete the table below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Atom 1** | **Atom 2** | **Electronegativity Difference (∆EN)** | **Bond Type** (Nonpolar Covalent (NPC), Polar Covalent (PC), or Ionic (I)) |
| Arsenic | Sulfur |  |  |
| Cobalt | Bromine |  |  |
| Germanium | Selenium |  |  |
| Silicon | Fluorine |  |  |

Answers:

1. What does it mean to say a bond is polar?

Electrons are shared but unequally. Electrons in the bond are “closer” to the atom with the higher electronegativity.

1. Complete the table below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Atom 1** | **Atom 2** | **Electronegativity Difference (∆EN)** | **Bond Type** Nonpolar Covalent (NPC), Polar Covalent (PC), or Ionic (I)) |
| Arsenic | Sulfur | 0.4 | NPC |
| Cobalt | Bromine | 1.1 | PC |
| Germanium | Selenium | 0.7 | PC |
| Silicon | Fluorine | 2.2 | I |