Electronegativity

The element that is farther right on the periodic table will be δ^- . This is the more electronegative atom. It has the higher Pauling's number. Recall ΔEN from unit 1.

Example: H_2O

H = 2.20 so δ^+
O = 3.44 so δ^-

O is farther right so the shared e^- are closer to its nucleus. O is then δ^-.

ΔEN = EN2-EN1 = 3.44-2. 20 = **1.24**

The bonds between H and O are therefore polar covalent.

ΔEN – predicting bond type
non polar covalent: 0-0.4
polar covalent: 0.5-1.6
ionic: 1.7 +

*Remember that EN2 is always the larger number. You find Pauling's numbers on the back of your periodic table.

Note: δ signifies partial or slightly

Calculate the ΔEN for the following and predict the bond types.

CO_2

H_2S

NH_3