

Polar Bonds – Supplemental Worksheet

1. True or False:

- a) Electronegativity trends are similar to ionization energy.
- b) As the electronegativity of an element increases the attraction for a shared pair of electrons decreases. .
- c) The ΔEN for a covalent bond must have a value > 2.2 .

2. For the following compounds identify what has partial positive and partial negative charges.

- a) HF
- b) H_2O
- c) HCl
- d) SO_3

3. Explain the difference between pure covalent bonds and polar covalent bonds.

4. Label the bond in each of the following compounds

- a) F_2
- b) HF
- c) KCl
- d) CuS

5. Which of the following compounds have dipole moments? For those that are not, explain why.

- a) HCl
- b) Br_2
- c) H_2Se
- d) CCl_4

6. True or False:

- a) Large dipole moments are non-polar, small dipole moments are polar.
- b) Hydrogen's electronegativity acts similar to phosphorus because they have the same electronegativity.
- c) $\delta+$ means that the electron spends more time with the element labeled $\delta-$.