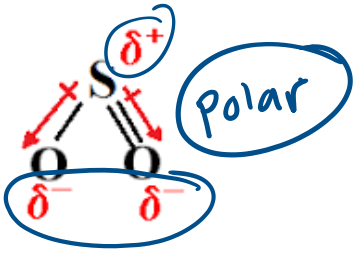
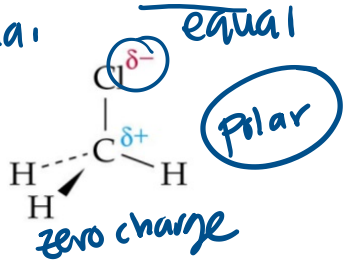
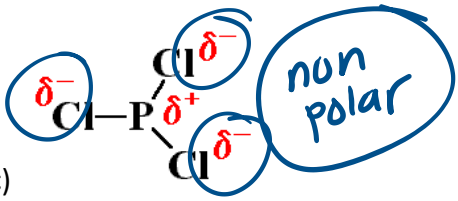
Warm-Up #21 Name:_____Date:_____

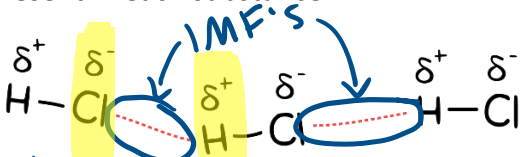
Part 1: Identify each molecule as either polar molecule or nonpolar molecule.

a) 

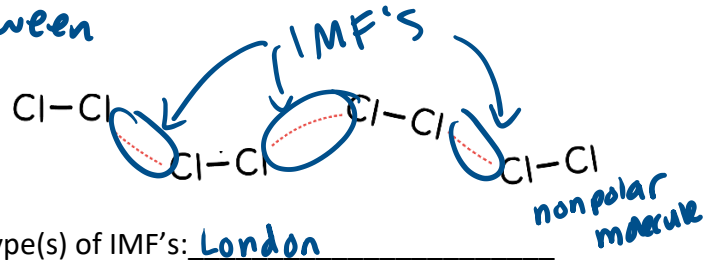
b) 

c) 

Part 2: For each substance, circle the lines that represent intermolecular forces (IMF's). Name the type(s) of IMF's present in each substance.

a) 

Type(s) of IMF's: London & Dipole-dipole
depends on molec. polarity

b) 

Type(s) of IMF's: London

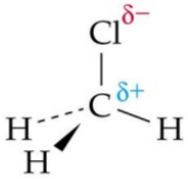
Part 3: Which substance from **Part 2** would have the highest boiling point? Explain your reasoning.

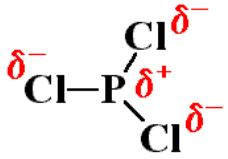
HCl b/c it has stronger IMF's

Warm-Up #21 Name:_____Date:_____

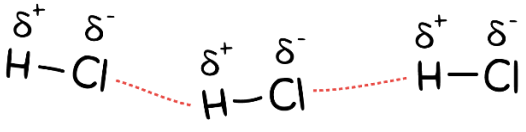
Part 1: Identify each molecule as either polar molecule or nonpolar molecule.

a) 

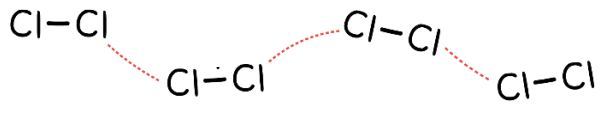
b) 

c) 

Part 2: For each substance, circle the lines that represent intermolecular forces (IMF's). Name the type(s) of IMF's present in each substance.

a) 

Type(s) of IMF's:_____

b) 

Type(s) of IMF's:_____

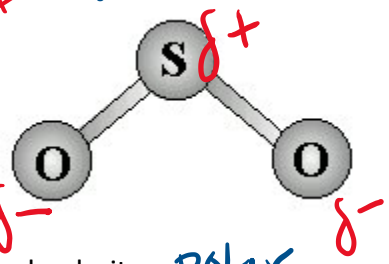
Part 3: Which substance from **Part 2** would have the highest boiling point? Explain your reasoning.

Part 4: For each molecule below, use electronegativity values to determine bond polarity. Draw δ^+ and δ^- for polar bonds. Determine molecular polarity and type(s) of intermolecular forces.

bond polarity = DO MATH (electroneg) Pinksheet

S 2.5 δ+
O 3.5 δ-
1

> 0.3 = polar bond
≤ 0.3 = nonpolar bond



S – O bond polarity: polar

Should you draw δ^+ and δ^- ? yes polar bond = Draw δ+/δ-

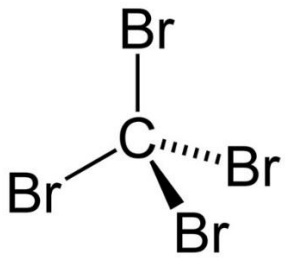
Are electrons equally distributed throughout the molecule? NO

Molecular polarity: polar molec polarity = look @ shape w/ δ+/δ-

Type(s) of IMF's: London + Dipole Dipole

IMF's depend on molecular polarity

Br 2.8
C 2.5
0.3



C – Br bond polarity: nonpolar

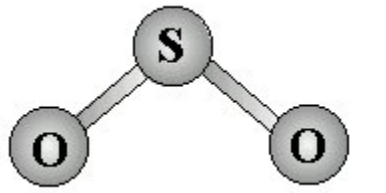
Should you draw δ^+ and δ^- ? NO nonpolar bond = DO NOT Draw δ+/δ-

Are electrons equally distributed throughout the molecule? yes

Molecular polarity: nonpolar

Type(s) of IMF's: London

Part 4: For each molecule below, use electronegativity values to determine bond polarity. Draw δ^+ and δ^- for polar bonds. Determine molecular polarity and type(s) of intermolecular forces.



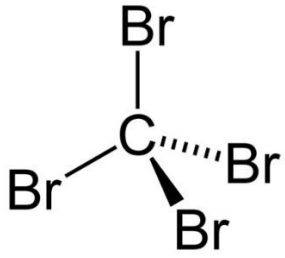
S – O bond polarity:_____

Should you draw δ^+ and δ^- ?_____

Are electrons equally distributed throughout the molecule?_____

Molecular polarity:_____

Type(s) of IMF's:_____



C – Br bond polarity:_____

Should you draw δ^+ and δ^- ?_____

Are electrons equally distributed throughout the molecule?_____

Molecular polarity:_____

Type(s) of IMF's:_____