

Hill-Petrucci

Homework

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41. a. $\text{H-H} < \text{H-C} < \text{H-N} < \text{H-O} < \text{H-F}$

b. $\text{C-C} < \text{C-I} < \text{C-Br} < \text{C-Cl} < \text{C-F}$

1. The only way to connect two points is with a straight line. A two atom molecule must be linear.

Yes it is possible to have a 3 atom molecule that is linear.

6. a. 180° b. 120° c. 109.5°

9. SO_2 is a bent molecule with polar bonds and results in a polar molecule.

SO_3 is a trigonal planar molecule with polar bonds but the trigonal planar shape causes the bond dipoles to cancel resulting in a nonpolar molecule.

10. a. is the answer

23. a. bent b. tetrahedral c. trigonal pyramidal

35. SO_2 has large bond angles because only three electron groups are found on the central atom of the molecule. H_2O has smaller bond angles because four electron groups are found on the central atom of the molecule.