

Name _____

Period _____

Date _____

Molecular Geometry—Practice Quiz #2

MOLECULE	LEWIS DIAGRAM	3D DRAWING & NAME OF SHAPE	BOND ANGLE	HYBRID	BOND POLARITY	MOLECULAR POLARITY	IMF	# OF SIGMA AND PI BONDS
1. SiH ₄								
2. PBr ₃								
3. NO ₂ ⁻								
4. AlF ₃								

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1. SiH_4		 Tetrahedral	109.5°	sp^3	Nonpolar	Nonpolar	Dispersion	4 sigma 0 pi
2. PBr_3		 Trigonal pyramidal	107.5°	sp^3	$\delta^+ \text{P} - \delta^- \text{Br}$ Polar	Polar	Dipole- Dipole	3 sigma 0 pi
3. NO_2^-		 Bent	118°	sp^2	Both Polar $\delta^+ \text{N} = \delta^- \text{O}$ $\delta^- \text{N} - \delta^- \text{O}$	Polar	Dipole- Dipole	2 sigma 1 pi
4. AlF_3		 Trigonal planar	120°	sp^2	$\delta^+ \text{Al} - \delta^- \text{F}$ Nonpolar Polar	Nonpolar Nonpolar	Ionic Bond	3 sigma 0 pi