Name _____ Date _____ Period _____

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Bond Polarity

Chemistry

Use the electronegativity (EN) values below. For each bond, find ΔEN (big − small) and classify the bond as nonpolar covalent, polar covalent, or ionic. Label δ+ and δ− on each polar covalent bond.

Element	H	C	N	O	F	Na	Mg	S	Cl	K	Br
EN	2.20	2.55	3.04	3.44	3.98	0.93	1.31	2.58	3.16	0.82	2.96

1. N–H

2. C–O

3. the bond between potassium and bromine

4. S–H

5. C–Cl

6. the bond between magnesium and oxygen

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7. Br–Br

8. the bond between oxygen and fluorine

9. Rank these bonds from least polar to most polar: O–H, C–H, N–H. Show ΔEN for each.

10. A student finds ΔEN for a C–F bond by doing $2.55 - 3.98 = -1.43$. Explain the mistake. Then give the correct ΔEN, the bond type, and the partial charges.

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