Worksheet: Ionic Versus Covalent Bonding

In each case, determine if an ionic or covalent compound will form. For ionic bonding show the transfer of all electrons and the resulting ions. For covalent cases, state how many electrons each atom needs to complete its octet and then draw the covalent compound. In both cases draw in any extra atoms that are needed.

cov. 1. N Cl

ΔEN = 3.16 - 3.04
= 0.12

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cov. 2. Se Cl

ΔEN = 3.16 - 2.55
= 0.61

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ionic 3. K F

ΔEN = 3.98 - 0.82
= 2.16

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ionic 4. Ba Cl

ΔEN = 3.16 - 0.89
= 2.27

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cov 5. C H

ΔEN = 2.55 - 2.20
= 0.35

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cov 6. As H

ΔEN = 2.20 - 2.18
= 0.02

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ionic 7. Sr Br

ΔEN = 2.96 - 0.95
= 2.01

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ionic 8. Cs O

ΔEN = 3.44 - 0.79
= 2.65

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cov. 9. P Cl

ΔEN = 3.16 - 2.19
= 0.97