**Dougherty Valley HS AP Chemistry**

**WORKSHEET #4**

**Bonding – Ionic**

**Name: Date: Period: Seat #:**

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| 1. Predict the chemical formula of the ionic compound formed between the following pairs of elements: |
| * 1. Al and F |
| * 1. K and S |
| * 1. Y and O |
| * 1. Mg and N |

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| 1. Write the electron configuration for each of the following ions, and determine which ones possess noble-gas configurations: |
| * 1. Sr2+ |
| * 1. Ti2+ |
| * 1. Se2— |
| * 1. Ni2+ |
| * 1. Br— |
| * 1. Mn3+ |

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| 1. Explain the following trends in lattice energy: |
| * 1. MgO > CaS |
| * 1. LiF > CsBr |
| * 1. CaO > KF |
| * 1. CaI2 > NaI |
| * 1. MgI2 > CaI2 |
| * 1. Na2O > K2O |

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| 1. 4. Arrange GaP BaS CaO and RbCl in order of increasing lattice energy. Explain why. |

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| 1. Arrange InAs, KBr, LiCl, SrSe, and ZnS in order of decreasing lattice energy. Explain why. |

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| 1. Rank the following elements below by the greatest electronegativity difference between bonds AND polarity of molecule?   CsF, NaCl, MgCl2, CH4 | |
| Electronegativity diff | Polarity |

1. Use the following VENN diagram to explain the difference between covalent, ionic, and metallic bonds: