**Honors Chemistry Section 1-3 Worksheet**

1. (a) State the octet rule.

(b) How many valence electrons does a nitrogen atom have?

(c) An atom has the electron configuration of 1s22s22p63s23p2. How many valence electrons does it have?

1. What is the Lewis symbol for (a) K, (b) Si, (c) Mg2+, and (d) P3-?
2. Use Lewis symbols to show the electron transfers that happen when Mg and Br atoms bond to form MgBr2.
3. Write the formulas that are formed from (a) barium and oxygen, (b) rubidium and iodine, (c) lithium and sulfur, (d) bromine and magnesium.
4. (a) Why does MgO have a greater lattice energy than NaF?

(b) Which would have a greater lattice energy, MgCl2 or SrCl2? Explain.

1. (a) Does lattice energy increase or decrease as (i) charge increases? (ii) as size increases?

(b) Arrange from lowest to highest lattice energies: LiCl, NaBr, RbBr, MgO.

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