A

1. A chemical bond is a force that holds two _____ together.
2. In both ionic bonds and covalent bonds, the atoms achieve a stable electron configuration of _____ electrons in the outer shell.
3. The _____ _____ are not likely to form chemical bonds because they already have a stable electron configuration.

B

1. In ionic bonds one atom _____ electrons to a second atom.
2. The atom that gains electrons becomes _____ charged.
3. The atom that loses electrons becomes _____ charged.
4. The attraction between the _____ and _____ ions holds the ions together.

C

1. In covalent bonds two atoms _____ electrons so that both can achieve a stable electrons configuration.
2. The attraction between the positive _____ of one atom and the negative _____ of the second atom holds the atoms together.

D

What type bond will likely form between the following pairs of elements:

1. Calcium and Sulfur
2. Potassium and Oxygen
3. Nitrogen and Bromine
4. Selenium and Sulfur

E

Answer the questions below about the compound $CaBr_2$.

1. The element that will form cations is _____.
2. The element that will form anions is _____.
3. What charge will the calcium ion have?
4. What charge will the bromine ion have?
5. What does the subscript 2 indicate?

F

1. Name an element that most likely lose one electron when it forms an ionic bond.
2. Name an element that needs to gain two electrons to become stable.
3. Name an element that is stable and not likely to form ionic or covalent bonds.
4. Why is the element you named in number three stable?

G

1. When writing formulas for ionic compounds, what should be true about the sum of the charges for the cations and the anions?
2. Show how this is true for the compound Ba_3N_2

H

Write the correct chemical formula for the following compounds.

1. Beryllium Sulfide
2. Aluminum Carbonate
3. Copper (II) Hydroxide
4. Ammonium Phosphate

I

Write the correct names for the following compounds.

1. MgI_2
2. Na_2CO_3
3. $(NH_4)_2SO_4$
4. Ba_3P_2

J

Draw electron dot diagrams for the following molecules.

1. I_2

2. CS_2

K

1. Draw an electron dot diagram for an element that will likely gain one electron.
2. Draw an electron dot diagram for an element that will not easily form chemical bonds.
3. Draw an electron dot diagram for an element that will form an ion with a charge of 3-.

L

1. Show the electron transfer between the following made-up elements.

2. What would the chemical formula for the compound that forms most likely be?

M

1. An atom gains or loses electrons to become an _____.
2. A neutral group of atoms that are covalently bonded together is a _____.
3. A charged group of atoms that are covalently bonded together is a _____.
4. The dots in an electron dot diagram represent _____ _____.

N

List the elements in each compound and next to each element write how many atoms of each element are represented by the chemical formula.

PbO_2 $Ca_3(PO_4)_2$