Bonding worksheet

What type of bond will be found in each of the following compounds? Ionic or covalent?

1. NaCl
2. CH4
3. KOH
4. FeCl3
5. PbSO4
6. SO2
7. N20
8. C6H12O6
9. NH2CH2COOH (glycine)
10. Cl2

Draw Lewis dot structure for each of the following:

1. H
2. O
3. F
4. Cl
5. P
6. S
7. C
8. N
9. I
10. Br
11. \_\_\_\_\_\_\_\_\_\_ bonds are found when metals and non-metals form a compound. When a metal forms an ion we say that it is a c\_\_\_\_\_\_\_\_\_\_\_ and when a non-metal forms an ion we say that it is a a\_\_\_\_\_\_\_\_\_\_. Cation’s and anion’s are attracted due to \_\_\_\_\_\_\_\_\_\_\_ charges which is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ attraction. Forming a cation or an anion involves the \_\_\_\_\_\_\_\_\_\_\_\_ of electrons.
12. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ bonds are found in compounds with only non-metals (including H). The sharing of electrons is found in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ compounds. Atoms share electrons or transfer electrons to fulfill the \_\_\_\_\_\_\_\_\_\_\_\_ rule which states atoms require an electron configuration like a \_\_\_\_\_\_\_\_\_\_ gas.

Draw Lewis structure for each of the following types of molecules:

1. CH4
2. HF
3. F2
4. I2
5. Br2
6. Number 23-25 all have \_\_\_\_\_\_\_\_ covalent bonds and are all found in column \_\_\_\_ on the period table.
7. H20
8. HCl
9. NH3
10. HI
11. CO2
12. O2
13. HCN
14. N2

Released Star Test questions:

1. Which of the following is a monatomic gas at STP?

A chlorine B fluorine C helium D nitrogen

1. When cations and anions join, they form what kind of chemical bond?

A ionic B hydrogen C metallic D covalent

1. Some of the molecules found in the human body are NH2CH2COOH (glycine), C6H12O6

(glucose), and CH3(CH2)16COOH (stearic acid). The bonds they form are

A nuclear. B metallic. C ionic. D covalent.

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| **Table of Common Molecules** | | | |
| **Name** | **Hydrogen** | **Chlorine** | **Ammonia** | **Methane** |
| Molecular Formula | H2 | Cl2 | NH3 | CH4 |

What type of bond do all of the molecules in the table above have in common?

1. covalent b. ionic c. metallic d. polar
2. Which element is capable of forming stable, extended chains of atoms through single, double, or triple bonds with itself?
3. carbon b. oxygen c. nitrogen d. hydrogen

40 Which of the following elements has the same Lewis dot structure as silicon?

1. germanium (Ge) b. aluminum (Al) c. arsenic (As) d. gallium (Ga)