

RQ on Chemical Bonds

Name: _____

Date: _____

- Which compound is *most likely* formed using covalent bonds?
A. CO₂ B. K₂O C. KBr D. CaBr₂
- How can two different nonmetals form a compound?
A. by sharing protons
B. by sharing electrons
C. by transferring protons
D. by transferring electrons
- When cations and anions join, they form what kind of chemical bond?
A. ionic B. hydrogen
C. metallic D. covalent
- In potassium fluoride, the potassium atom donates an electron and the fluorine atom takes an electron. When the compound potassium fluoride is formed, which of the following are formed?
A. covalent bonds B. ionic bonds
C. magnetic forces D. nuclear forces
- Which of the following statements *best* explains why atoms bond?
A. Atoms bond to make new substances.
B. Atoms bond to become less chemically stable.
C. Atoms bond to change from a liquid to a solid.
D. Atoms bond to become more chemically stable.
- Which of the following occurs in an ionic bond?
A. Two ions share protons.
B. Two ions share electrons.
C. Similarly charged ions attract.
D. Oppositely charged ions attract.
- Which of the following are most directly involved in chemical bonding?
A. protons B. neutrons
C. alpha particles D. valence electrons

8.

Periodic Table of Elements

Group																		18
1																	2	
1	H Hydrogen 1.01											13	14	15	16	17	18	
2	Li Lithium 6.94	Be Beryllium 9.01											B Boron 10.81	C Carbon 12.01	N Nitrogen 14.01	O Oxygen 16.00	F Fluorine 19.00	Ne Neon 20.18
3	Na Sodium 22.99	Mg Magnesium 24.31	3	4	5	6	7	8	9	10	11	12	Al Aluminum 26.98	Si Silicon 28.09	P Phosphorus 30.97	S Sulfur 32.07	Cl Chlorine 35.45	Ar Argon 39.95
4	K Potassium 39.10	Ca Calcium 40.08	Sc Scandium 44.96	Ti Titanium 47.88	V Vanadium 50.94	Cr Chromium 52.00	Mn Manganese 54.94	Fe Iron 55.85	Co Cobalt 58.93	Ni Nickel 58.69	Cu Copper 63.55	Zn Zinc 65.39	Ga Gallium 69.72	Ge Germanium 72.61	As Arsenic 74.92	Se Selenium 78.96	Br Bromine 79.90	Kr Krypton 83.80
5	Rb Rubidium 85.47	Sr Strontium 87.62	Y Yttrium 88.91	Zr Zirconium 91.22	Nb Niobium 92.91	Mo Molybdenum 95.94	Tc Technetium 98.00	Ru Ruthenium 101.07	Rh Rhodium 102.91	Pd Palladium 106.42	Ag Silver 107.87	Cd Cadmium 112.41	In Indium 114.82	Sn Tin 118.71	Sb Antimony 121.76	Te Tellurium 127.60	I Iodine 126.91	Xe Xenon 131.29
6	Cs Cesium 132.91	Ba Barium 137.33	La Lanthanum 138.91	Hf Hafnium 178.49	Ta Tantalum 180.95	W Tungsten 183.85	Re Rhenium 186.21	Os Osmium 190.20	Ir Iridium 192.22	Pt Platinum 195.08	Au Gold 196.97	Hg Mercury 200.59	Tl Thallium 204.38	Pb Lead 207.20	Bi Bismuth 208.96	Po Polonium 208.98	At Astatine 210.00	Rn Radon 222.00
7	Fr Francium 223.00	Ra Radium 226.00	Ac Actinium 227.03	Rf Rutherfordium (261)	Db Dubnium (262)	Sg Seaborgium (263)	Bh Bohrium (264)	Hs Hassium (265)	Mt Meitnerium (268)									

Leroy combines magnesium (Mg) and fluorine (F).

Based on the periodic table, which statement describes the interaction of these two elements?

- A. Mg is a metal and F is a nonmetal that forms an ionic bond.
- B. Mg is a nonmetal and F is a metal that forms an ionic bond.
- C. Mg is a metal and F is a metal that forms a covalent bond.
- D. Mg is a metalloid and F is a nonmetal that forms a covalent bond.

9. Which type of bond is responsible for atoms of pure gold to remain bonded?

- A. covalent
- B. hydrogen
- C. ionic
- D. metallic

10. Which is a unique characteristic of the bonding between metal atoms?

- A. Atoms require additional electrons to reach a stable octet.
- B. Atoms must give away electrons to reach a stable octet.
- C. Atoms share valence electrons only with neighboring atoms to reach a stable octet.
- D. Delocalized electrons move among many atoms creating a sea of electrons.