

Bonding Review KEY

1. **Electrons** are shared or exchanged during a chemical reaction
2. If an atom loses one or more electrons, it becomes a positive ion, cation. **T**
3. Two or more non-metal atoms will share their valence electrons to make it stable like a noble gas. **T**
4. When N atom bonds with an O atom, a diatomic molecule is formed. **F**
5. If an atom gains one or more electrons, it becomes a negative ion, anion. **T**
6. If Cl atom bonds with another Cl atom, a diatomic molecule is formed. **T**
7. A chemical formula represents a(n) **compound**.
8. Metallic atoms **lose** electrons.
9. Non-metallic atoms when bonding with metals will **gain** electrons
10. Valence is the number of electrons an atom has. **F**
11. Every element has the same valence. **F**
12. Some elements have more than one valence. **T**
13. An atom with a + valence lends electrons. **T**
14. An atom with a – valence borrows electrons. **T**
15. An atom with a +2 valence can borrow two electrons. **F**
16. An atom with a valence of +2 can lend two electrons. **T**
17. An atom with 6 outer-ring electrons can lend 3 electrons. **F**
18. An atom with 7 outer-ring electrons has a valence of -1. **T**
19. An atom with 7 outer-ring electrons can borrow 1 electron. **T**

20. Complete the following Chart:

	# of protons	# of electrons	# of valence electrons	Electrons lost or gained	Cation or Anion	Valence Number (Charge)
Sodium	11	11	1	Loses 1	Cation	+1
Oxygen	8	8	6	Gains 2	Anion	-2
Magnesium	12	12	2	Loses 2	Cation	+2
Chlorine	17	17	7	Gains 1	Anion	-1
Aluminum	13	13	3	Loses 3	Cation	+3