

Neutral Atoms Forming Ions

Atoms never have more than 8 valence electrons. Atoms with fewer than 4 valence electrons tend to lose these electrons to become cations (positive). Elements with greater than 4 valence electrons tend to gain more electrons for a total of eight becoming anions (negative).

Below write out equations showing whether an element gains or loses electron. Be sure to indicate how many electrons are gained or lost. Indicate if the final ion is a cation or anion.

	Type of Ion
1. K loses $1e^-$ à K^+	Cation
2. O gains $2e^-$ à O^{2-}	Anion
3. Mg	
4. Al	
5. F	
6. S	
7. Na	
8. N	
9. Ba	
10. Br	
11. I	
12. Ra	
13. Ca	
14. Cl	
15. Sr	
16. P	

17. Are anions metals or nonmetals?

18. Are cations metals or nonmetals?