

Making Ions - Remember that atoms want a filled outer orbital to be in the most stable state. Complete the chart below showing what happens for each of the atoms to become an ion.

Element	Lewis Dot	# of valence e <sup>-</sup>	Cation or anion?	Gain/Lose e <sup>-</sup>	Draw ion	Name of ion
Na	Na	1	Cation	Lose 1	Na <sup>+1</sup>	Sodium ion
S	S	6	Anion	Gain 2	S <sup>-2</sup>	Sulfide
Cl	Cl	7	Anion	gain 1	Cl <sup>-</sup>	chloride ion
Be	Be	2	cation	lose 2	Be <sup>+2</sup>	Beryllium ion
Al	Al	3	cation	lose 3	Al <sup>+3</sup>	Aluminum ion
Ne	Ne	8	X	X	X	≡
K	K	1	cation	lose 1	K <sup>+1</sup>	Potassium ion
N	N	5	anion	gain 3	N <sup>-3</sup>	nitride
O	O	6	anion	gain 2	O <sup>-2</sup>	oxide
Ca	Ca	2	cation	lose 2	Ca <sup>+2</sup>	Calcium ion
P	P	5	anion	gain 3	P <sup>-3</sup>	Phosphide
B	B	3	cation	lose 3	B <sup>+3</sup>	Boron ion

31 P  
15 S  
11 B

2  
8  
8  
18

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