

Name: _____

Ions from the Octet Rule

Fill in the following table to indicate how each of the following atoms behaves when it follows the octet rule to form positive or negative ions. The first three are done as examples.

Atom	Number of Electrons in Valence Shell	Loses or Gains	Number of Electrons Lost or Gained	Resulting Ion
$_{15}\text{P}$	5	gains	3	P^{3-}
$_{49}\text{In}$	3	loses	3	In^{3+}
$_{14}\text{Si}$	4	loses/gains	4/4	$\text{Si}^{4+} / \text{Si}^{4-}$
$_{8}\text{O}$	6	gains	2	O^{2-}
$_{33}\text{As}$	5	gains	3	As^{3-}
$_{35}\text{Br}$	7	gains	1	Br^{1-}
$_{13}\text{Al}$	3	loses	3	Al^{3+}
$_{12}\text{Mg}$	2	loses	2	Mg^{2+}
$_{19}\text{K}$	1	loses	1	K^{1+}
$_{18}\text{Ar}$	8	neither	0	Ar
$_{51}\text{Sb}$	5	gains	3	Sb^{3-}
$_{56}\text{Ba}$	2	loses	2	Ba^{2+}
$_{1}\text{H}$	1	loses	1	H^{1+}
$_{17}\text{Cl}$	7	gains	1	Cl^{1-}
$_{35}\text{Br}$	7	gains	1	Br^{1-}
$_{16}\text{S}$	6	gains	2	S^{2-}
$_{7}\text{N}$	5	gains	3	N^{3-}
$_{6}\text{C}$	4	loses/gains	4/4	$\text{C}^{4+} / \text{C}^{4-}$
$_{32}\text{Ge}$	4	loses/gains	4/4	$\text{Ge}^{4+} / \text{Ge}^{4-}$
$_{38}\text{Sr}$	2	loses	2	Sr^{2+}
$_{86}\text{Rn}$	8	neither	0	Rn