Atom/Ion Builder Elements

Without Neutrons		With Neutrons	
$_{1}H$	hydrogen atom (1p, 1e)	$^{1}_{1}H$	hydrogen atom (1p, 1e, 0n)
$_{1}H^{+}$	hydrogen ion (1p)	$^{1}_{1}H^{+}$	hydrogen ion (1p, 0n)
$_{1}H^{-}$	hydride ion (1p, 2e)	$^{1}_{1}H^{-}$	hydride ion (1p, 2e, 0n)
$_{2}He$	helium atom (2p, 2e)	$^{4}_{2}He$	helium atom (2p, 2e, 2n)
$_{3}Li$	lithium atom (3p, 3e)	$^{7}_{3}Li$	lithium atom (3p, 3e, 4n)
$_{3}Li^{+}$	lithium ion (3p, 2e)	$^{7}_{3}Li^{+}$	lithium ion (3p, 2e, 4n)
$_{4}Be$	beryllium atom (4p, 4e)	$^{9}_{4}Be$	beryllium atom (4p, 4e, 5n)
$_{4}Be^{2+}$	beryllium ion (4p, 2e)	$^{9}_{4}Be^{2+}$	beryllium ion (4p, 2e, 5n)
$_{5}B$	boron atom (5p, 5e)	$^{11}_{5}B$	boron atom (5p, 5e, 6 n)
$_{6}C$	carbon atom (6p, 6e)	$^{12}_{6}C$	carbon atom (6p, 6e, 6n)
$_{7}N$	nitrogen atom (7p, 7e)	$^{14}_{7}N$	nitrogen atom (7p, 7e, 7 n)
$_{7}N^{3-}$	nitride ion (7p, 10e)	$^{14}_{7}N^{3-}$	nitride ion (7p, 10e, 7n)
$_{8}O$	oxygen atom (8p, 8e)	$^{16}_{8}O$	oxygen atom (8p, 8e, 8n)
$_{8}O^{2-}$	oxide ion (8p, 10e)	$^{16}_{8}O^{2-}$	oxide ion (8p, 10e, 8n)
$_{9}F$	fluorine atom (9p, 9e)	$^{19}_{9}F$	fluorine atom (9p, 9e, 10n)
$_{9}F^{-}$	fluoride ion (9p, 10e)	$^{19}_{9}F^{-}$	fluoride ion (9p, 10e, 10n)
$_{10}Ne$	neon atom (10p, 10e)	$^{20}_{10}Ne$	neon atom (10p, 10e, 10 n)
$_{11}Na$	sodium atom (11p, 11e)	$^{23}_{11}Na$	sodium atom (11p, 11e, 12n)
$_{11}Na^{+}$	sodium ion (11p, 10e)	$^{23}_{11}Na^{+}$	sodium ion (11p, 10e, 12n)
$_{12}Mg$	magnesium atom (12p, 12e)	$^{24}_{12}Mg$	magnesium atom (12p, 12e, 12n)
$_{12}Mg^{2+}$	magnesium ion (12p, 10e)	$^{24}_{12}Mg^{2+}$	magnesium ion (12p, 10e, 12n)
$_{13}Al$	aluminum atom (13p, 13e)	$^{27}_{13}Al$	aluminum atom (13p, 13e, 14n)
$_{13}Al^{3+}$	aluminum ion (13p, 10e)	$^{27}_{13}Al^{3+}$	aluminum ion (13p, 10e, 14n)

$_{14}Si$	silicon atom (14p, 14e)	$^{28}_{14}Si$	silicon atom (14p, 14e, 14n)
$_{15}P$	phosphorus atom (15p, 15e)	$^{31}_{15}P$	phosphorus atom (15p, 15e, 16n)
$_{15}P^{3-}$	phosphide ion (15p, 18e)	$^{31}_{15}P^{3-}$	phosphide ion (15p, 18e, 16n)
$_{16}S$	sulfur atom (16p, 16e)	$^{32}_{16}S$	sulfur atom (16p, 16e, 16n)
$_{16}S^{2-}$	sulfide ion (16p, 18e)	$^{32}_{16}S^{2-}$	sulfide ion (16p, 18e, 16n)
$_{17}Cl$	chlorine atom (17p, 17e)	$^{35}_{17}Cl$ $^{36}_{17}Cl$	chlorine atom(17p, 17e, 18n) chlorine atom(17p, 17e, 19n)
$_{17}Cl^{-}$	chloride ion (17p, 16e)	$^{35}_{17}Cl^{-}$ $^{36}_{17}Cl^{-}$	chloride ion (17p, 16e, 18n) chloride ion (17p, 16e, 19n)
$_{18}Ar$	argon atom (18p, 18e)	$^{40}_{18}Ar$	argon atom (18p, 18e, 22 n)

Assumptions

Without using neutrons: Neutrons are normally found in the nucleus however neutrons do not affect whether the element is an atom or an ion.

With using neutrons: Neutrons are normally found in the nucleus however the number of neutrons in an element can vary. The atom and ions are for the most common isotopes of the element.