

Isotopic Notation	${}_{12}^{25}\text{Mg}^{+2}$			
atomic number		8		35
mass number			16	80
p ⁺				
n ^o		9		
e ⁻			8	36
Charge		0	0	
<u>which</u> are IONS?				
<u>which</u> are ISOTOPES?				

Isotopic Notation			${}_{8}^{16}\text{O}$	
atomic number		35		8
mass number	25	80		
p ⁺				
n ^o				9
e ⁻	10	36		
Charge	+2			0
<u>which</u> are IONS?				
<u>which</u> are ISOTOPES?				

MASS # = _____ plus _____

ATOMIC # = _____

FOR AN ATOM, _____ equals _____

WHEN NEUTRAL (0 charge) _____ equals _____

NEUTRONS = _____ minus _____

FOR AN ION, _____ DOES NOT EQUAL _____

FOR AN ION, CHARGE = _____ MINUS _____

FOR AN ION, #P = _____ PLUS _____

FOR AN ION, #e⁻ = _____ MINUS _____

2 ISOTOPES OF AN ATOM HAVE SAME

_____ but diff _____ thus diff _____

ISOTOPIC NOTATION:



Isotopic Notation		${}_{8}^{17}\text{O}^{-2}$		
atomic number	17		37	
mass number			85	35
p ⁺				
n ^o	20			
e ⁻			36	17
Charge	0			0
<u>which</u> are IONS?				
<u>which</u> are ISOTOPES?				

Isotopic Notation		${}_{17}^{35}\text{Cl}$		
atomic number	37		17	
mass number	85			17
p ⁺				
n ^o			20	
e ⁻	36			10
Charge			0	-2
<u>which</u> are IONS?				
<u>which</u> are ISOTOPES?				

Isotopic Notation	$^{25}_{12}\text{Mg}^{+2}$	$^{17}_8\text{O}$	$^{16}_8\text{O}$	$^{80}_{35}\text{Br}^{-1}$
atomic number	12	8	8	35
mass number	25	17	16	80
p ⁺	12	8	8	35
n ^o	13	9	8	45
e ⁻	10	8	8	36
Charge	+2	0	0	-1
which are IONS?	✓			✓
which are ISOTOPES?		✓	✓	

Isotopic Notation	$^{25}_{12}\text{Mg}^{+2}$	$^{80}_{35}\text{Br}^{-1}$	$^{16}_8\text{O}$	$^{17}_8\text{O}$
atomic number	12	35	8	8
mass number	25	80	16	17
p ⁺	12	35	8	8
n ^o	13	45	8	9
e ⁻	10	36	8	8
Charge	+2	-1	∅	0
which are IONS?	x	x		
which are ISOTOPES?			x	x

MASS # = P plus N
 ATOMIC # = P
 FOR AN ATOM, P equals e⁻
 WHEN NEUTRAL (0 charge) P equals e⁻
 # NEUTRONS = M# minus A#(P)

FOR AN ION, P DOES NOT EQUAL e⁻
 FOR AN ION, CHARGE = P MINUS e⁻
 FOR AN ION, #P = e⁻ PLUS charge
 FOR AN ION, #e⁻ = P MINUS charge

2 ISOTOPES OF AN ATOM HAVE SAME
P but diff N thus diff M#
 ISOTOPIC NOTATION:

$$\begin{matrix} M\# \\ A\# \end{matrix} S_y \text{Chg}$$

Isotopic Notation	$^{37}_{17}\text{Cl}$	$^{17}_8\text{O}^{-2}$	$^{85}_{37}\text{Rb}^{+1}$	$^{35}_{17}\text{Cl}$
atomic number	17	8	37	17
mass number	37	17	85	35
p ⁺	17	8	37	17
n ^o	20	9	48	18
e ⁻	17	10	36	17
Charge	0	-2	+1	0
which are IONS?		x	x	
which are ISOTOPES?	x			x

Isotopic Notation	$^{85}_{37}\text{Rb}^{+1}$	$^{35}_{17}\text{Cl}$	$^{37}_{17}\text{Cl}$	$^{17}_8\text{O}^{-2}$
atomic number	37	17	17	8
mass number	85	35	37	17
p ⁺	37	17	17	8
n ^o	48	18	20	9
e ⁻	36	17	17	10
Charge	+1	∅	0	-2
which are IONS?	x			x
which are ISOTOPES?		x	x	