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Maximum Number of Electrons in Shells of Atoms: The 1.3611111 Ratio

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The maximum number allowed of electrons in each shell of an atom, according to the Standard Model is as follows:

Shell:	K	L	M	N	O	P	Q
n	1	2	3	4	5	6	7
# of electrons	2	8	18	32	50	72	98

The number of shells are seven [7] as in the seven periods of the periodic table of the elements. The manner in which the number of electrons are derived involve an additional specified number of electrons from one shell to the next as illustrated in the next table:

Add on:		+6	+10	+14	+18	+22	+26
# of electrons	2	8	18	32	50	72	98

From the previous table of add-on electrons, one may then perceive the fact that the difference between the number of add-on electrons from one shell to the next is always four [4].

Difference:		4	4	4	4	4	
Add on:		+6	+10	+14	+18	+22	+26
# of electrons	2	8	18	32	50	72	98

In this manner, one may observe three number series of significance in the maximum number of electrons for the shells of an atom:

2 8 18 32 50 72 98

6 10 14 18 22 26

4 4 4 4 4

The number series relating to the maximum number of electrons in the shells of an atom reflect a specific pattern.

2 8 18 32 50 72 98

The pattern may be visualized as of the multiples by doubling the given numbers for the maximums.

Doubling:

2, 4, 8, 16, 32,...,
8, 16, 32,...,
18, 36, 72,...,
32, 64, 128,...,
50, 100, 200, 400, 800,...,
72, 144, 288, 576,...,
98, 196, 392,...,

Halving:

.5, 1, 2, 4, 8, 16, 32,...,
2, 4, 8, 16, 32,...,
9, 18, 36, 72,...,
8, 16, 32, 64, 128,...,
25, 50*, 100, 200, 400,* ***800****,...,*
9, 18, 36, 72, 144, 288, 576,...,
49, 98, 196, 392,...,

K	**.5, 1, 2**, 4, 8, 16, 32,...,
L	**2, 4, 8**, 16, 32,...,
M	**9, 18**, 36, 72,...,
N	**8, 16, 32**, 64, 128,...,
O	***25, 50***, *100, 200, 400,* ***800***,...,
P	**9, 18, 36, 72**, 144, 288, 576,...,
Q	**49, 98**, 196, 392,...,

From the previous *mediatio/duplatio* exercise, one may observe that the different series of maximum numbers reflect specific numbers series or constants.

K | L | N | O are the same multiple series of	**.5**, 1, **2**, 4, **8**, 16, **32**...,

M | P are the same multiple series of	9, **18,** 36, **72...,**

Q represents the multiple series of	49, **98,** 196, 392...,

K | L | N | O are the same multiple series of **.5**, 1, **2**, 4, **8**, 16, **32**...,

The K | L | N | O shells reflect then the **base 5c or base** 2c series, depending upon how one conceptualizes the doubling/halving of the numbers.

M | P are the same multiple series of 9, **18,** 36, **72...,**

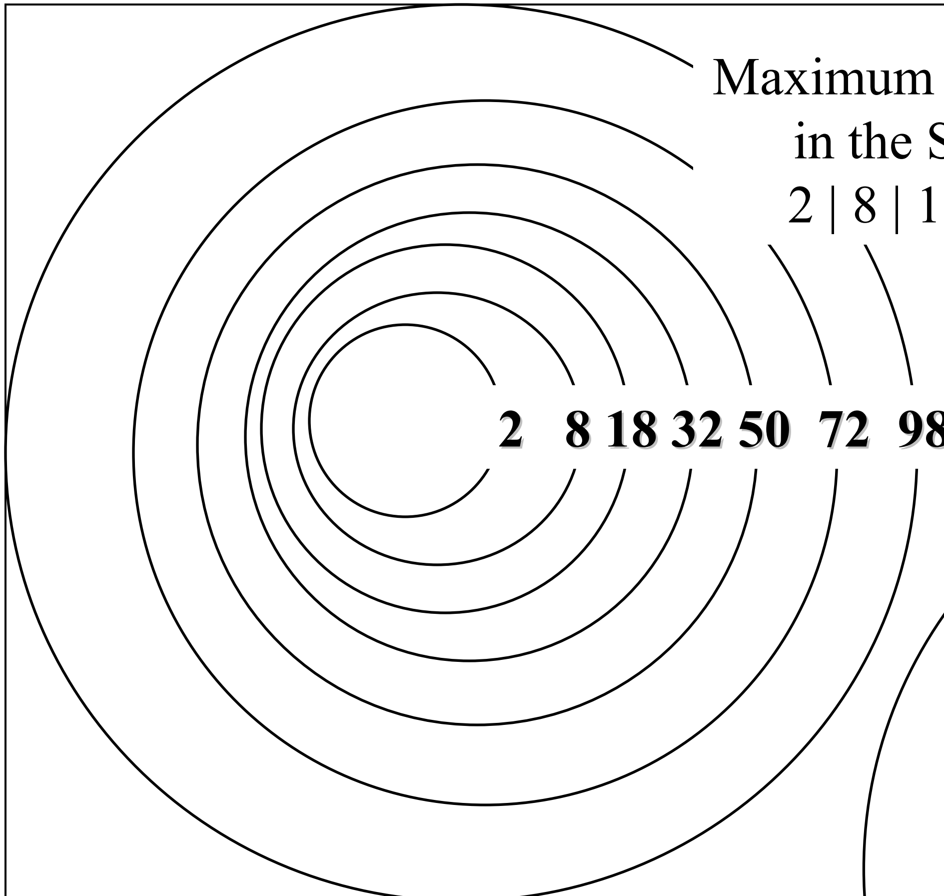
The M | P shells reflect then the **base 9c** series.

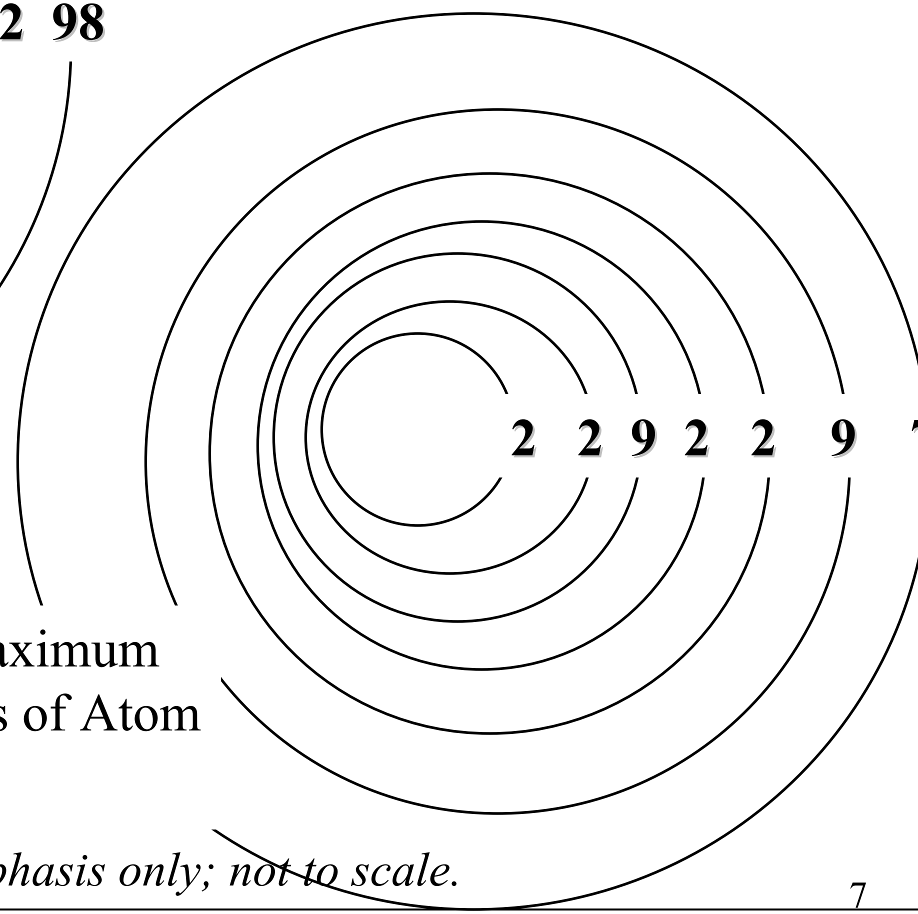
Q represents the multiple series of 49, **98,** 196, 392...,

The Q shell reflects then the **base 7c** series, inasmuch 49 is a multiple of 7.

K | L | N | O is base 2c
M | P is base 9c series
Q is base 7c

Maximum Number of Electrons
in the Shells of an Atom:
2 | 8 | 18 | 32 | 50 | 72 | 98





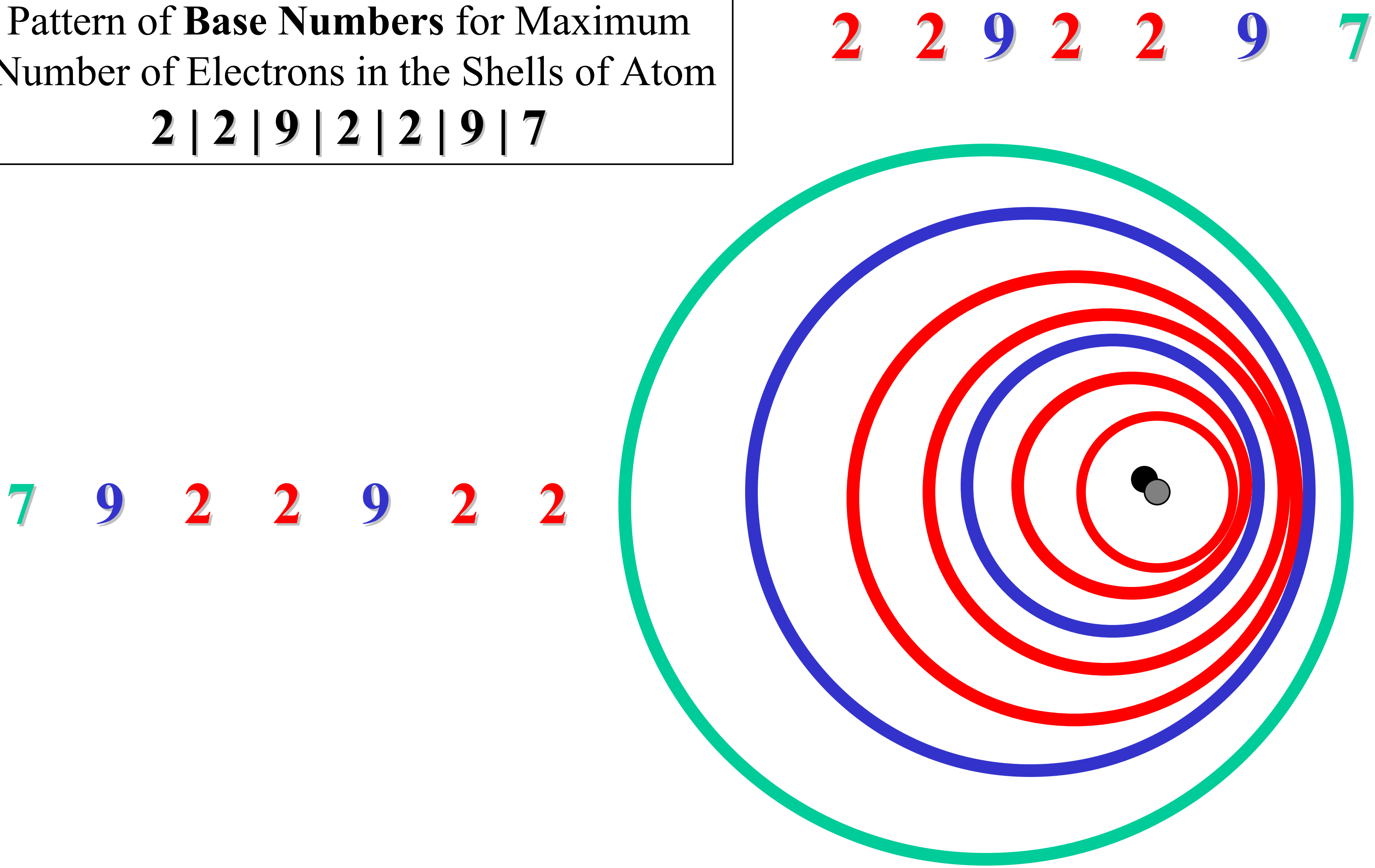
Pattern of Base Numbers for Maximum
Number of Electrons in the Shells of Atom

2 | 2 | 9 | 2 | 2 | 9 | 7

NB: Illustrations of atomic shells for emphasis only; not to scale.

Pattern of **Base Numbers** for Maximum Number of Electrons in the Shells of Atom

2 | 2 | 9 | 2 | 2 | 9 | 7



NB: Illustrations of atomic shells for emphasis only; not to scale.

Consider now the relations of proportion among the numbers related to the seven different shells:

2 8 18 32 50 72 98

8 / 2	=	4
18 / 8	=	2.25
32 / 18	=	1.777777778
50 / 32	=	1.5625
72 / 50	=	1.44
98 / 72	=	**1.361111111**

A 1.36 fractal relation in the maximum number of electrons in the *outer limit* of the shells of an atom.

The maximum number of electrons for the two outermost shells of the atom reveal a proportion of **1.361111111**. This event now forms part of the long list of chemical and physical events and constants that relate to the fractal expression of 1.36 and 1.366 as emphasized in the Earth/matriX essays.

Many other relationships and aspects of the maximum number of electrons in the shells of an atom remain to be emphasized in upcoming Earth/matriX essays. For now, I present yet another example of the 1.36c fractal expression that has been found to be significant in other matter-energy events in chemical and physical events and constants. A list of some of these events and constants illustrated to date in the Earth/matriX series of essays may be found at: *www.earthmatrix.com/sciencetoday/view_solar_system.html*.

But, one may recall for now the significance between respectively the boiling and freezing points of water, and the ionization energy in the Hydrogen atom.

373.15 / 273.15 = **1.3661c** fractal *[boiling/feeezing points of water]*

Consult: www.earthmatrix.com/temperature_scale.html

-13.6 eV *[ionization energy for Hydrogen atom;* ***inner/outer limit****]*

Numerous other examples exist and have been pointed out in the Earth/matriX essays. The **1.3611111c** fractal expression in the maximum number of electrons in an atom is but one more example of how spacetime/motion, matter-energy, are interrelated through their fractal expressions.

1.3661c fractal *[boiling/feeezing points of water ratio]*
-13.6 eV *[ionization energy for Hydrogen atom]*
1.3611111 *[ratio outer limit atomic shells 6 and 7]*

One must recognize then the interconnectedness of the 1.36c and 1.366c fractal expressions throughout the chemical and physical events in matter-energy. For one of the extreme relationships of water [Hydrogen two and Oxygen one], between its boiling and freezing point one finds the 1.366c fractal to be of underlying significance for the **thermodynamic temperature scale**.

For the amount of energy required to displace an electron from its orbit within the Hydrogen atom, again one finds the 1.36c fractal to be of underlying significance in the **ionization energy** of Hydrogen. Inasmuch as there is only one electron in the Hydrogen atom it is viewed as the **inner/outer limit**.

Now, upon considering the maximum number of electrons allowed within the shells of an atom, according to the same Standard Model, we find that the 1.36c relationship again is of significant determination within the **outer limit of the shells of an atom**.

1.3661c fractal *[boiling/feeezing points of water ratio]*

-13.6 eV *[ionization energy for Hydrogen atom]*

For a detailed analysis consult: www.theschemata.com/energy_hydrogen.html

1.3661 Wm^2 ***[solar constant]***

For an extensive analysis constul: www.earthmatrix.com/sciencetoday/solar-constant.html

One must then consider many of the other chemical and physical constants of matter-energy, such as the ***solar constant*** of **1.3661** Wm^2 . The list of related fractal 1.36 | 1.366 events is long. In this brief essay, I only refer to a few so as not to repeat analyses already presented in other essays in the Earth/matriX series.

1.3611111 *[ratio outer limit atomic shells 6 and 7]*

One must realize that none of the limiting **1.36c/1.366c** fractal values, as they occur in matter-energy chemical and physical events, represent or reflect random coincidences. Spacetime/movement, matter-energy, events are everywhere connected. We need, however, to better comprehend their interconnectedness and the fractal numerical values that they produce in their observation and measurement.

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