Interlude Two (Hundred And Seventy-Three):
"Quantum Mathematics and the Modern Gregorian Calendar"

In the first section of this interlude, we will examine the condensed values of the various designations of time which comprise the modern Gregorian calendar, specifically how these designations of time condense to values which mostly involve members of the '3,6,9 Family Group', as is the case in relation to the interrelations of the celestial bodies which the calendar is built off of (these being the Sun, the Moon, and the Earth). The interrelations of the celestial bodies will be examined in the third section of this interlude, after we examine the designations of time which comprise the modern Gregorian calendar, along with a few of the units of distance which comprise the modern imperial system of measurement. (While a few of the interrelations of the celestial bodies will involve variations on the multiple-digit Number 273, with this being an important multiple-digit Number which will be the subject of the final two sections of this interlude.)

In terms of denominations of time, our modern Gregorian calendar involves years, which are comprised of months, which (temporarily disregarding the concept of the week) are comprised of days, which are comprised of hours, which are comprised of minutes, which are comprised of seconds (with the second being the smallest commonly used unit of time). Below, we will start with the smallest of these units of time (this being the second), and work our way back up to the largest of these units of time (this being the year).

(It should be noted at this point that throughout these examples (as well as a few others), the Quantities will be represented digitally, as opposed to being spelled out with letters. This is due to the fact that we will be focusing on the condensed values of these multiple-digit Quantities, all of which will be highlighted in a Family Group color code.)

To start, there are sixty seconds in a minute, as is indicated below.

60(6)

Which brings us up to minutes, of which there are sixty in an hour, as is indicated below.

60(6)

While there are twenty-four of these hours in a day, as is indicated below.

24(6)

We can see that the three non-condensed Quantities which are shown above all condense to the 6.

Continuing on, there are an "Average" of thirty days in a month, as is indicated below.

30(3)

It should be noted that the Quantity of 30 which is seen above has been rounded down from a value of 30.4375, for reasons which will be explained in the endnotes of this interlude. (While the Quantum Mathematical concept of Averages will be examined in "Chapter 6.6: Averages".)

This brings us up to months, of which there are twelve in a year, as is indicated below.

12(3)

While when we include the leap year, there are three hundred and sixty-five (and twenty-five hundredths) days in a year, as is indicated below.

365.25(3)

It should be noted that the Quantity of 365.25 which is seen above has not been rounded down, for reasons which will be explained in the endnotes of this interlude.

We can see that the three non-condensed Quantities which are shown above all condense to the 3.

This all indicates that the three smaller denominations of time (these being seconds, minutes and hours) all involve non-condensed values which condense to the 6, while the three larger denominations of time (these being days, months, and years) all involve non-condensed values which condense to the 3 (with the year pertaining to both months and days). These condensed values and Quantities all involve members of the '3,6,9 Family Group', in that half of the of the designations of time involve condensed values of 3, as do the Quantities of Numbers which are contained within each of the two groups of denominations, in that each of these groups of denominations contains *three* Numbers. (To clarify, the first group of denominations involves values of 60, 60, and 24, while the second group of denominations involves the values of 30, 12, and 365.25.) While the other three designations of time involve condensed values of 6, as does the total Quantity of the Numbers which are contained within the two groups of denominations (as the two groups of three Numbers combine to a group which contains a total of *six* Numbers). (Also, the condensed values of these six denominations of time Add to a non-condensed sum which condenses to the 9, in that "6+6+6+3+3+3=27(9)".)

(Also, before we move on, it should be noted that in terms of an atomic clock, the second can be defined as *the duration of 9,192,631,770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the caesium 133 atom*, with this Quantity of 9,192,631,770 condensing to the 9.)

Though neither of the lists which are seen above include the denomination of time which is referred to as the *week*. The week is comprised of seven days, as is indicated below.

7(7)

Above, we can see that the week contains a non-condensed Quantity of days which condenses to the 7.

The condensed Quantity of 7 which is seen above indicates one of the manners in which the week maintains the 'Connection Between The 7 And The 3,6,9 Family Group' in relation to the other denominations of time. In this case, the 'Connection Between The 7 And The 3,6,9 Family Group' involves the fact that the week is separate from all of the previous denominations of time, and always involves the condensed 7 in Connection with a condensed member of the '3,6,9 Family Group' relative to any of the other denominations of time. The 3 is Connected to the 7 in relation to the two largest units of time (these being years and months), while the 6 is Connected to the 7 in relation to the two median units of time (these being days and hours), and the 9 is Connected to the 7 in relation to the two smallest units of time (these being minutes and seconds), all of which is shown and explained below.

In relation to the two largest denominations of time (these being years and months, both of which involve condensed 3's), the week involves the Connections which are shown below.

there are 52 (7) weeks in a year
there are 4.3(7) weeks in a month (on Average)

Above, we can see that whether in relation to the month or the year, the week involves a relative non-condensed value which condenses to the 7.

In the two examples which are seen above, the Connection between the 7 and the 3 involves the Quantities which condense to the 7 being contained within Quantities which condense to the 3 (in that these Connections involve the Quantities of weeks which are contained within the month and the year). Though throughout the rest of these examples, this interrelation will be reversed, in that the week contains Quantities of the smaller units of time within itself, as is shown and explained below.

In relation to hours, the week involves a relative condensed 6, and in relation to the two smallest units of time (these being minutes and seconds), the week involves a relative condensed 9, as is shown below.

there are 168(6) hours in a week
(24X7=168(6))

there are 10,080(9) minutes in a week
(60X24X7=10080(9))

there are 604,800(9) seconds in a week
(60X60X24X7=604800(9))

Above, we can see that the week contains a non-condensed Quantity of hours which condenses to the 6, a non-condensed Quantity of minutes which condenses to the 9, and a non-condensed Quantity of seconds which condenses to the 9. (While the week contains a non-condensed Quantity of days which condenses to the 7, as was mentioned a moment ago.)

The examples which are seen above all indicate the 'Connection Between The 7 And The 3,6,9 Family Group', which I suspect is an extension (or completion) of the *law of the 3 and the 7* (with the *law of the 3 and the 7* having been mentioned briefly in "Chapter Zero"). In terms of the 'Connection Between The 7 And The 3,6,9 Family Group', it only stands to reason that if the 7 has a special Connection with the 3, then it would also have a Connection with the 6 and the 9, which are both Related to the 3 (as a Sibling/Cousin and a fellow Family Group member, respectively). Also, the 6 is simply the sum which is yielded by Adding two 3's together, while the 9 is simply the sum which is yielded by Adding three 3's together (or the product which is yielded by Multiplying two 3's by one another), which means that the 'Connection Between The 7 And The 3,6,9 Family Group' may only actually involve a Connection between the 3 and the 7 (in that the Connection of the 7 to the 6 and the 9 is due to the fact that the 6 and the 9 are simply aggregated collections of 3's). Also, as has been mentioned previously, the 'Invalid Functions' involve Division by the 3, the 6, the 7, and the 9, which again indicates that the 7 shares its unique Connection with the entire '3,6,9 Family Group'. (Again, the 'Connection Between The 7 And The 3,6,9 Family Group' will be seen in a few of the upcoming chapters, and will eventually be explored more thoroughly in "Chapter 7^2 : Squaring the Enneagram".)

Next, we will list the various Quantities of the smaller designations of time which are contained in the larger designations of time, all of which are shown below.

hours in a day 24(6)	hours in a month 24X30=720(9)	hours in a year 24X365.25=8,766(9)
minutes in a day 60X24=1,440(9)	minutes in a month 60X24X30=43,200(9)	minutes in a year 60X24X365.25=525,960(9)
seconds in a day 60X60X24=86,400(9)	seconds in a month 60X60X24X30=2,592,000(9)	seconds in a year 60X60X24X365.25=31,557,600(9)

Above, we can see that all nine of these non-condensed Quantities condense to members of the '3,6,9 Family Group'.

That brings this section to a close.

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Next, before we move on to the interrelations of the Earth, the Moon, and the Sun, we will briefly examine a few of the units of distance which comprise the modern imperial system of measurement, specifically the fact that these particular units of measurement all contain Quantities of the smaller units of measurement which condense to members of the '3,6,9 Family Group', as is shown below.

there are 12(3) inches in a foot
there are 66(3) feet in a chain
there are 660(3) feet in a furlong
there are 5,280(6) feet in a mile
there are 63,360(9) inches in a mile
there are 3(3) miles in a league
there are 15,840(9) feet in a league
there are 36(9) inches in a yard
there are 3(3) feet in a yard

Above, we can see that all of these units of measurement contain Quantities of the smaller units of measurement which condense to members of the '3,6,9 Family Group' (all of which are highlighted in blue).

That brings this relatively brief section to a close. (While a list of other measurements which involve Quantities which condense to members of the '3,6,9 Family Group' is included in the endnotes of this interlude.)

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Next, we will examine the three celestial bodies whose interrelations are responsible for all of the denominations of time which were examined in the first section of this interlude. More specifically, we will examine the measurements which involve the dimensions of, and distances between, the Earth, the Moon, and the Sun. These measurements may not be exact, in that the available measurements are all very close approximations. Though these are large dimensions, and vast distances, and the measurements are all assumed to be over 99.9% accurate. Also, these measurements will all involve miles, as opposed to kilometers, which is due to the fact that the units of measurement which comprise the metric system (such as centimeters, meters, and kilometers) do not display the behaviors which we are interested in. As was explained in the previous section, the imperial units of measurement generally involve Quantities of lesser units which condense to members of the '3,6,9 Family Group' (at least in relation to distance), where as the metric system uses a seemingly arbitrary starting point, with everything being built up from there with 'Powers Of 10'.

To begin, we will list the diameters of these three celestial bodies, along with their distances from one another, as is shown below. (The distance between the Moon to the Sun is not included in this list, as it involves a fluctuating value due to the revolution of the Moon around the Earth.)

the diameter of the Sun is 864,000(9) miles
the diameter of the Moon is 2,160(9) miles
the diameter of the Earth is 7,926(6) miles
the distance of the Sun from the Earth is 93,312,000(9) miles
the distance of the Moon from the Earth is 233,280(9) miles

Above, we can see that all five of these non-condensed values condense to members of the '3,6,9 Family Group', all of which are highlighted in blue. Also, we can determine that the diameter of the Sun is four hundred times the diameter of the Moon (as "864,000/2,160=400"), while the Sun is four hundred times further away from the Earth than is the case in relation to the Moon (as "93,312,000/233,280=400"). This coincidence causes the Sun and the Moon to appear to be the same size when they are viewed from the Earth.

Also, it should be noted that the Division of the diameter of the Earth by the diameter of the Moon yields the 'Infinitely Repeating Decimal Number' quotient of 3.6694... (as "7,926/2,160=3.6694..."). (The green Numbers which are contained within the quotient of 3.6694... are the non-repeating part of this particular 'Infinitely Repeating Decimal Number', with this form of highlighting having been seen previously in "Chapter Two".) The Whole and non-repeating parts of this 'Infinitely Repeating Decimal Number' quotient involve a complete instance of the '3,6,9 Family Group' along with an extra 6, as is highlighted here: 3.669 (with the extra 6 shown in non-highlighted black). This particular quotient will be examined in the final section of this interlude, therefore for now, we will continue on with our examination of these diameters and distances.

Next, we can determine that the Division of the diameter of the Moon by the diameter of the Earth yields the rounded up quotient of **.**273, in that "2,160/7,926= **.**27252081756245268735806207418622255866767600302800908 40...". The rounded up quotient of **.**273 involves a 'Decimal Number' variation on a very important multiple-digit Number which will be examined in the next section of this interlude, therefore for now, we will continue on with our examination of these diameters and distances. (We will also revisit this 'Infinitely Repeating Decimal Number' in the final section of this interlude, where it will be seen along with the 'Infinitely Repeating Decimal Number' of 3**.**6694... which was seen a moment ago, as these two Numbers share a "Reciprocal" interrelation which is independent of the relationship between the Earth and the Moon.)

While the Division of the distances which the Sun and the Moon are from the Earth by the diameters of their respective celestial bodies yields non-condensed quotients of 108 in both cases, with these Matching non-condensed quotients of 108 each condensing to the 9. (The Sun involves the Function of "93,312,000/864,000" and the Moon involves the Function of "233,280/2,160".)

(The majority of the values which will be seen throughout the remainder of this section will condense to members of the '3,6,9 Family Group', as is the case in relation to the value of 108 which was seen in the previous paragraph.)

Also, the mass of the Moon is approximately **.**07342, while the mass of the Earth is approximately 5**.**9726, and the mass of the Sun is approximately 1,988,500 (with all of these measurements being "X10^{24} kg"). This means that the mass of the sun is approximately three hundred and thirty-three thousand times Greater than the mass of the Earth (as "1,988,500 / 5**.**9762=332,736**.**5215354238......"), the mass of the sun is approximately twenty-seven million times Greater than the mass of the Moon (as "1,988,500 / **.**07342=27,083,900**.**84445655......"), and the mass of the Earth is approximately eighty-one times Greater than the mass of the Moon (as "5**.**9726 / **.**07342=81**.**348406428766......"). The condensed values of the approximate values of 333,000, 27,000,000, and 81 all maintain the '3,6,9 Family Group', as all three of these approximate values condense to the 9. (To clarify, while these three masses all involve kilograms, which are a part of the metric system, in this case, the units of measurement are irrelevant, as the quotients simply indicate the fractional relationships which exist between the masses of these three celestial bodies.)

(Before we move on, it should be noted that many of the 'Decimal Numbers' which will be seen in this interlude will carry on to arbitrary lengths (as is the case in relation to the three 'Decimal Number' quotients which were seen in the previous paragraph), and will therefore contain far more digits than are necessary for our current purposes. In these cases, a representative sample of the 'Decimal Number' will be shown, and this representative sample will be followed by elongated ellipses ("......'s"), with three of the individual "**.**'s" indicating that these 'Decimal Numbers' run on past the representative sample, and the additional three "**.**'s" indicating that these 'Decimal Numbers' may (or may not) be 'Infinitely Repeating Decimal Numbers'.)

Next, we can determine that the Average distance between the Earth and the Moon (this being 238,855mi) is approximately 30 times Greater than the diameter of the Earth, as "233,280 / 7,926 = 29.43224829......", with the approximate value of 30 condensing to the 3.

Also, the Average radius of the Moon is 1,079.3838980348926...... mi, while its equatorial radius is 1,080.0301240748192...... mi, with both of these values rounding (up and down, respectively) to 1,080, which condenses to the 9.

Then there is the fact that inclination of the Moon is 5.145°, with this value condensing to the 6 (in that "5+1+4+5=15(6)"), or to the 6 and the 9, as is highlighted here: 5.145.

While the Moon's eccentricity is .0549, with this value condensing to the 9 (in that "5+4+9=18(9)"), or to two 9's, as is highlighted here: .0549.

Also, there is the fact that the Average orbital speed of the Moon is .635041358466...... mi/s. This value can be rounded down to .6, carried out to hundredths and condensed to the 9 (as "6+3=9"), or carried out to hundred-thousandths and condensed to the 9 (as "6+3+5+0+4=18(9)"). Also, when this 'Decimal Number' is carried out to twelve places, it condenses to two complete instances of the '3,6,9 Family Group', along with an extra 6, as is highlighted here: .635041358466 (with the 'Quantity Of Twelve' condensing to the 3).

Then, there is the longitude of ascending node regressing by one revolution in 18.6 years, and the argument of pedigree progressing by one revolution in 8.85 years, with the value of 18.6 condensing to the 6 (or the 9 and the 6, as is highlighted here: 18.6), and the value of 8.85 condensing to the 3.

Next, there is the fact that one Lunar day is equivalent to 27.321582...... Earth days, with this 'Decimal Number' condensing to the 3 when it is carried out to millionths. Also, when this 'Decimal Number' is rounded down to the 'Whole Number' 27, it condenses to the 9 (as "2+7=9(9)"), while when it is rounded down to tenths, it condenses to the 3 (as "2+7+3=12(3)"), or to the 9 and the 3, as is highlighted here: 27.3. Also, rounding this Quantity down to tenths yields a variation on the important multiple-digit Number which was seen earlier in this section as the rounded up quotient of .273 which is yielded by the Function of "Moon diameter/Earth diameter". As was mentioned at the start of this interlude, variations on the multiple-digit Number 273 can be found in a variety of places (celestial as well as mathematical), as was seen in this section, and as will be explained more thoroughly in the next section of this interlude.

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In this section, we will examine a few variations on the multiple-digit Number 273, two of which were seen in the previous section of this interlude.

We will start with the fact that the ratio of a Solar year to a sidereal year (or that of any denomination of Solar time to a matching denomination of sidereal time) involves a variation on the multiple-digit Number 273, in that a Solar year consists of 31,557,600 seconds, while the sidereal year consists of 31,471,401 seconds, and these two Quantities Divide to a rounded down quotient of 1.00273 (as "31,557,600/31,471,401= 1.0027389629079429924......"). (As an aside, the Quantity of seconds which comprise one Solar year (this being 31,557,600) condenses to the 9, while the Quantity of seconds which comprise a sidereal year (this being 31,471,401) condenses to the 3, and the difference between these two Quantities (this being 86,199) condenses to the 6, with these three condensed values comprising a complete '3,6,9 Family Group'.)

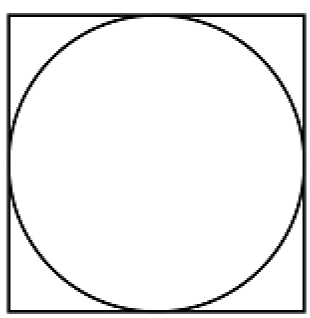
Also, there is the fact that the Quantity of days between the summer solstice (which usually occurs on June 20th or June 21st) and the vernal equinox (which usually occurs on March 20th or March 21st) involves the Number 273, in that "10+31+31+30+31+30+31+31+28+20=273".

Next, there is the fact that the cosmic background radiation is 2.725 kelvin above absolute zero. This temperature rounds up to 2.73 kelvin, with this value of 2.73 involving a Whole and Decimal Number variation on the Number 273. While water freezes at 273 kelvin, and liquifies at 273° Celsius above absolute zero, with both of these temperatures involving the Number 273. Also, there is the fact that water freezes at 0° Celsius, with this 0 indicating another variation on the Number 273, in that the conversion from kelvin to Celsius involves the Subtraction of the Number 273 (for example, water freezes at 273 k and 0° C, and "273 k - 273 = 0° C").

Then there are the theories that the human menstrual and gestation periods both involve variations on the Number 273. These theories claim that the human menstrual period lasts an Average of 27.3 days, while the human gestational cycle lasts an Average of 273 days, though at this point, I have not been able to find conclusive (reputable) evidence for either of these Average values. The closest values which I have been able to find involve 28 days for the Average menstrual cycle, and 40 weeks for the average gestational cycle, with 40 weeks containing 280 days (as "40X7=280"). However, I suspect that at some point in the past these 273 variants may have been valid Average values, as from an evolutionary standpoint, it stands to reason that both of these cycles could be dependent on the 27.3 day (sidereal) Lunar month. This dependency on the Lunar cycle may well have diminished in modern times, due to artificial light sources, as well as an overall lack of exposure to Moonlight.

Next (getting off of celestiality), there is *Charles' law*, this being that *all gases expand equally on heating, namely, 1/273.16 of their 0° C volume for every additional degree Celsius*. This fraction involves a denominator of 273.16, which rounds down to the Number 273.

Next, moving on to basic Geometry, a variation on the Number 273 can be yielded by Dividing the area of a square with a length of *X* by the area of a circle with a diameter of *X*, as is explained below. (It should be noted that the diagram which is seen below is not to scale.)



<--------- 12in. --------->

Above, we see a diagram which involves a circle with a 12in diameter, which is contained within a 12inX12in square. The 12in circle has an area of 113.04sq in, while the 12inX12in square has an area of 144sq in, and the Division of the area of the square by the area of the circle yields a 'Decimal Number' quotient which, when it is rounded down to thousandths, involves a variation on the Number 273 (in that "144/113.04=1.27388535031847133757961783......").

While the Number 273 is also connected to pi, in that a 'Decimal Number' variant of the Number 273 can be yielded by the relatively simple Function(s) of "(4 - π) / π". For example, if we were to carry pi out to ten places, then the Functions would be "4 - 3.1415926535 = .8584073465", and ".8584073465 / 3.1415926535 = .273239544771554......", with the 'Decimal Number' quotient of .273239544771554...... rounding down to .273.

Also, it should be noted that the Number 273 can also be considered to be a collection of nine 30's, along with 1/10th of 30 (in that "30X9=270", "30 X .1=3", and "270+3=273"). While the Number 273 can also be considered to be four 60's, one 30, and 1/10th of 30 (or 1/20th of 60), which in terms of time, would equate to four minutes and thirty-three seconds. (This is apparently the inspiration for the John Cage song *4'33*, which simply involves 273 seconds of silence.)

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Next, we will move on to the concept of 'Multiplicative Reciprocity'. The specific form of 'Multiplicative Reciprocity' which we will be examining in this section involves the "Multiplicative Inverse" of a variant of the multiple-digit Number 273, this being the 'Infinitely Repeating Decimal Number' 3.6694... which was seen in the third section of this interlude. In that section, we encountered two interrelated quotients which are yielded by the Division of the diameters of the Earth and the Moon by one another. These two 'Decimal Number' quotients are 3.6694... (with this being the quotient which is yielded by the Function of "Earth diameter/Moon diameter") and .27252081756245268735806207418622255866767600302800908 40... (with this being the quotient which is yielded by the Function of "Moon diameter/Earth diameter"). In that previous section, it was mentioned then that these two 'Infinitely Repeating Decimal Number' quotients are Reciprocally interrelated, and it is this Reciprocal interrelation which will be examined in this section. (To clarify, the term *'Multiplicative Inverse'* is interchangeable with the term *'Multiplicative Reciprocal'*, as these terms both refer to the same overall concept.)

In relation to traditional mathematics, the standard method which is used to determine the 'Multiplicative Inverse' of a Number is to Divide the 1 by the Number in question, as is shown below.

1/A = B
1/B = A
AXB = 1

Above, we can see that the Division of the 1 by a Number (which in this case is indicated by the designation of *A*) yields the 'Multiplicative Inverse' of that Number (which in this case is indicated by the designation of *B*), and inversely, the Division of the 1 by this 'Multiplicative Inverse' yields the original Number (in that "1/B=A"). While the Multiplication of the original Number by its 'Multiplicative Inverse' yields the 1, in that "A X B = 1".

The chart which is seen above is shown again below, this time with the arbitrary value of 4 replacing the designation of *A* (while the Division of the 1 by the arbitrary value of 4 will yield a 'Decimal Number' quotient of .25, which will replace the designation of *B*).

1/4 = .25
1/.25 =4
.25X4=1

Above, we can see that the Division of the 1 by the 4 yields a non-repeating 'Decimal Number' quotient of .25, and the Division of the 1 by the value of .25 yields a 'Whole Number' quotient of 4. While on the bottom of the chart, we can see that the Multiplication of the values of .25 and 4 by one another yields a 'Whole Number' product of 1, with this product of 1 confirming this instance of 'Multiplicative Reciprocity'.

Next, we will replace the values of 4 and .25 with the Reciprocal quotients which are yielded by the Functions of "Moon diameter/Earth diameter" and "Earth diameter/Moon diameter" (respectively), as is shown below.

1 / .27252081756245268735806207418622255866767600302800908 40... = 3.6694...
1 / 3.6694... = .27252081756245268735806207418622255866767600302800908 40...
.27252081756245268735806207418622255866767600302800908 40... X 3.6694... = .9...

Above, we can see that the Division of the 1 by either of these two 'Decimal Numbers' yields the 'Multiplicative Inverse' of the divisor, while the Multiplication of these 'Multiplicative Inverses' by one another yields a product of 1 (as the 'Infinitely Repeating Decimal Number' .9...). (To clarify, the 'Infinitely Repeating Decimal Number' .9... and the 'Whole Number' 1 are the same Number, as will be explained in "Chapter Eight: Solving the Invalid Functions".)

The method which is described above is the standard method which is used to determine the 'Multiplicative Inverse' of a Number. Though in relation to the celestial diameters which were examined earlier, the concept of 'Multiplicative Reciprocity' arises as a result of the Division of two values by one another. This is due to the fact that 'Multiplicative Inverses' can also be yielded in this alternate manner, as can be seen in relation to the arbitrary Numbers 10 and 5, in that "10/5 = 2", "5/10 = .5", and "2 X .5 = 1" (with the values of 2 and .5 being the 'Multiplicative Inverses' in this arbitrary example).

Taking this into account, we can determine that 'Multiplicative Inverses' maintain a form of Reciprocity between one another, one which can also be indicated with instances of Reciprocal fractions. This is due to the fact that any 'Whole Number' can be represented as a fraction (for example, the 1 can be represented by the fraction 1/1, the 2 can be represented by the fraction 2/1, the 3 can be represented by the fraction 3/1, etc.), as is also the case in relation to 'Decimal Numbers' (for example, the 'Decimal Number' .5 can be represented by the fraction 1/2, the 'Decimal Number' .25 can be represented by the fraction 1/4, the 'Decimal Number' .125 can be represented by the fraction 1/8, etc.).

This means that in relation to the arbitrary Reciprocal values of 2 and .5 which were determined a moment ago, the 2 can be represented as the fraction 2/1, and the 'Multiplicative Inverse' of the 2 (this being .5) can be represented as the Reciprocal fraction 1/2. While no matter how these two values are indicated, these two Numbers condense to the Reciprocal values of 2 and 5, respectively. These Reciprocal condensed values involve the '2/5 Cousins', with this being indicative of the fact that

'Multiplicative Reciprocity' around the condensed 1 is simply another manner in which we can describe the opposition which is maintained between the concepts of the Quality and the Quantity of a Number. (The opposition which exists between the interrelated concepts of Quality and Quantity, as well as their interrelation with the overall concept of 'Cousin Numbers', was seen in "Chapter One".) This all indicates that the overall concepts of Quality and Quantity are themselves Reciprocals of one another.

This overall form of Reciprocity maintains in relation to all of the non-3/6 Cousins, as can be seen in the chart which is shown below.

Reciprocal fractions	Multiplicative Reciprocals	condensed values
1/1 - 1/1	1 - 1	'1/1 Self-Cousins'
2/1 - 1/2	2 - .5	'2/5 Cousins'
4/1 - 1/4	4 - .25	'4/7 Cousins'
5/1 - 1/5	5 - .2	'2/5 Cousins'
8/1 - 1/8	8 - .125	'8/8 Self-Cousins'

The chart which is seen above does not include the fractions 3/1, 6/1, 7/1, or 9/1, which is due to the fact that the Reciprocal fractions of 1/3, 1/6, 1/7, and 1/9 are all Invalid fractions (as they involve the 'Invalid Functions' of "1/3", "1/6", "1/7", and "1/9", respectively). The members of the '3/6 Sibling/Cousins' each maintain a unique form of Reciprocity, as does the 'Self-Sibling/Cousin 9' (in relation to itself), as will be explained in upcoming chapters. (While the fraction 1/7 converts to an 'Infinitely Repeating Decimal Number' whose condensed value will be determined in "Chapter Eight: Solving the Invalid Functions".)

This all indicates that the 'Cousin Relationship' which is maintained between the various pairs of 'Base Numbers' involves a 'Multiplicative Reciprocity' around the condensed 1, in that each of the non-'3,6,9 Family Group' member Cousin pairs Multiply by one another to yield non-condensed products which condense to the 1, in that "1X1=1(1)", "2X5=10(1)", "4X7=28(1)", and "8X8=64(1)". Also, as an aside, it should be noted that the differences between the non-condensed values of the products which are yielded by these various instances of non-'3,6,9 Family Group' member Cousins all condense to the 9, in that "64-28=36(9)", "28-10=18(9)", and "10-1=9(9)". (While as was mentioned a moment ago, this 'Multiplicative Reciprocity' around the condensed 1 is not maintained by the '3/6 Sibling/Cousins' or the 'Self-Sibling/Cousin 9', both of which maintain a 'Multiplicative Reciprocity' around the condensed 9, in that "3X6=18(9)" and "9X9=81(9)".)

Furthermore, we can extend this Reciprocal concept out a bit further in order to determine that the 'Sibling Relationship' which is maintained between various pairs of 'Base Numbers' involves an 'Additive Reciprocity' around the 9, in that each of the Sibling pairs Add to the 9, as was explained in "Chapter Zero".

While in carrying the concept of 'Additive Reciprocity' out even further, we can determine that in addition to maintaining an 'Additive Reciprocity' around the 9, pairs of Numbers can be considered to maintain 'Additive Reciprocity' around any of the 'Base Numbers', as can be seen in the chart which is shown below.

'Additive Reciprocals'

around the 1: 1/9, 2/8, 3/7, 4/6, 5/5
around the 2: 1/1, 2/9, 3/8, 4/7, 5/6
around the 3: 1/2, 3/9, 4/8, 5/7, 6/6
around the 4: 1/3, 2/2, 4/9, 5/8, 6/7
around the 5: 1/4, 2/3, 5/9, 6/8, 7/7
around the 6: 1/5, 2/4, 3/3, 6/9, 7/8
around the 7: 1/6, 2/5, 3/4, 7/9, 8/8
around the 8: 1/7, 2/6, 3/5, 4/4, 8/9
around the 9: 1/8, 2/7, 3/6, 4/5, 9/0 - (Siblings)

Above, we can see that the bottommost horizontal row of the chart contains the five familiar pairs of Siblings, all of which maintain an 'Additive Reciprocity' around the 9, as has been explained previously. We have already determined that in relation to these five pairs of 'Sibling Numbers', there is only one instance of 'Self-Siblings', these being the '9/0 Self-Siblings', which in this case are highlighted arbitrarily in red (as can be seen on the bottom-right of the chart). While each of the other horizontal rows contains five pairs of Numbers which maintain an 'Additive Reciprocity' around one of the other 'Base Numbers' (in terms of the condensed values of their sums), with each of these rows containing an alternate instance of 'Self-Siblings', all of which are highlighted arbitrarily in red. The nine pairs of 'Self-Siblings' which are contained within this chart run diagonally from the top-left of the chart towards the bottom-right of the chart (in the ascending order of 1-4), and then continue on vertically from the top-right of the chart downwards to the bottom-right of the chart (in the ascending order of 5-9). (While these two intertwined runs of Matching Numbers are each contained within alternating horizontal rows.)

Also, getting back to the concept of 'Multiplicative Reciprocity', we can determine that in addition to maintaining 'Multiplicative Reciprocity' around the condensed 1, pairs of Numbers can be considered to maintain 'Multiplicative Reciprocity' around any of the 'Base Numbers' (in terms of the condensed values of their products), as can be seen in the chart which is shown below. (The "X's" which are seen to the right of this chart indicate 'Base Numbers' which do not maintain 'Multiplicative Reciprocity' around that particular Number, as is explained below the chart.)

'Multiplicative Reciprocals'

around the 1: 1/1, 2/5, 4/7, 8/8	3/X, 6/X, 9/X
around the 2: 1/2, 4/5, 7/8	3/X, 6/X, 9/X
around the 3: 1/3, 2/6, 4/3, 5/6, 7/3, 8/6	9/X
around the 4: 1/4, 2/2, 5/8, 7/7	3/X, 6/X, 9/X
around the 5: 1/5, 2/7, 4/8	3/X, 6/X, 9/X
around the 6: 1/6, 2/3, 4/6, 5/3, 7/6	9/X
around the 7: 1/7, 2/8, 4/4, 5/5	3/X, 6/X, 9/X
around the 8: 1/8, 2/4, 5/7	3/X, 6/X, 9/X
around the 9: 1/9, 2/9, 3/3*,4/9, 5/9, 6/6*, 7/9, 8/9, 9/9*	

Above, we can see that the topmost horizontal row of the chart contains the four familiar pairs of non-'3,6,9 Family Group' member Cousins (these being the '1/1 Self-Cousins', the '2/5 Cousins', the '4/7 Cousins', and the '8/8 Self-Cousins'), all of which maintain a 'Multiplicative Reciprocity' around the 1, as has been explained previously. We have already determined that in relation to these four pairs of non-'3,6,9 Family Group' member Cousins, there are two instances of 'Self-Cousins', these being the 'Self-Cousin 1' and the 'Self-Cousin 8', both of which are highlighted above in red (as is the case in relation to all of the instances of 'Self-Cousins' which are contained within the chart which is seen above). While all of the other horizontal rows contains pairs of Numbers which maintain a 'Multiplicative Reciprocity' around one of the other 'Base Numbers' (in terms of the condensed values of their products), with three of these rows containing alternate instances of 'Self-Cousins'. The first, fourth, and seventh rows each contain two instances of 'Self-Cousins' (all of which involve members of the '1,2,4,8,7,5 Core Group'), while the ninth row contains three instances of 'Self-Cousins' (all of which involve members of the '3,6,9 Family Group'). The six pairs of 'Self-Cousins' which involve members of the '1,2,4,8,7,5 Core Group' run diagonally from the top-left of the chart towards the bottom-right of the chart (in the ascending order of 1/1, 2/2, 4/4), and then continue on vertically from the bottom-right of the chart upwards to the top-right of the chart (in the ascending order of 5/5, 7/7, 8/8). (These two runs of Matching Numbers are contained within the same three horizontal rows, where as in relation to the previous example, the two runs of 'Self-Siblings' are contained within alternating rows.) While in relation to the bottommost row of the chart (which contains the three pairs of 'Self-Cousins' which involve '3,6,9 Family Group' members, as was mentioned a moment ago), the "*'s" which are seen next to the Matching 3's and 6's indicate that these Numbers maintain additional forms of 'Multiplicative Reciprocity' around the 9 (in that "3X6=18(9)" and "3X9=27(9)" in relation to the 3, and "6X3=18(9)" and "6X9=54(9)" in relation to the 6). Also, the "*" which is seen next to the Matching 9's indicates that the 9 maintains its own unique form of 'Multiplicative Reciprocity', in that all of the 'Base Numbers' can be considered to maintain 'Multiplicative Reciprocity' with the 9 around the condensed 9. (This unique behavior is due to an important characteristic of the 9 which will be explained in upcoming Standard Model of Physics themed chapters.) While as was mentioned a moment ago, the "X's" which are seen to the far-right of the chart all indicate 'Base Numbers' which do not maintain 'Multiplicative Reciprocity' around that particular Number. This lack of 'Multiplicative Reciprocity' exclusively involves '3,6,9 Family Group' members, with this behavior being due to characteristics of the '3,6,9 Family Group' members which will be explained in upcoming Standard Model of Physics themed chapters.

The alternate forms of Additive and Multiplicative Reciprocity which were examined in this section were included in this interlude due to the fact that they help to explain the overall concept of Reciprocity (and therefore the concepts of 'Sibling Numbers' and 'Cousin Numbers'), though these alternate forms of Reciprocity will be disregarded going forward from here. (The only forms of 'Additive Reciprocity' which we will be working with will be the 'Sibling Relationships' which are maintained between the various pairs of 'Base Numbers', while the only forms of 'Multiplicative Reciprocity' which we will be working with will be the 'Cousin Relationships' which are maintained between the various pairs of 'Base Numbers'.)

That brings this section, and therefore this interlude, to a close, with the exception of the endnotes, which are included below. These endnotes contain a few clarifications, as well as a list of various measurements (domestic and foreign, modern and arcane), all of which involve values which condense to members of the '3,6,9 Family Group'.

Endnotes

To begin these endnotes, we will explain the previous choices in rounding down (or not rounding down) some of the Quantities of the denominations of time which were examined in the first section of this interlude. In relation to all of the divisions of units into lesser units (such as hours into minutes, minutes into seconds, etc.), we worked with Quantities which involve 'Whole Numbers', with the exception of the Quantity of days which are contained in a year (this being 365.25), and the Quantity of weeks which are contained in a month (this being 4.3). While in relation to the month, we worked with the rounded down Quantity of 30 days, when the Quantity of days which is contained in the average month is actually 30.4375 (with this being the quotient which is yielded by the Function of "365.25/12"). This rounding down of the Quantity of days which is contained in the average month is required in order for all of these behaviors to maintain, as without it, we have an unexplainable condensed 4. Meanwhile, the specific value of 365.25 (this being the Quantity of days which is contained in a year) is required in order for all of these behaviors to maintain, as is that of 4.3 (this being the Quantity of weeks which is contained in a month), as without these 'Decimal Number' values, we would have unexplainable condensed values of 5 and 4, respectively. (At this point, I have no explanation for the requirement of the one instance of rounding down.)

While we will close these endnotes with a list of measurements, all of which involve values which condense to members of the '3,6,9 Family Group'. This list (which by no means is all-inclusive) is shown below, with all of the condensed '3,6,9 Family Group' members highlighted in blue. (All of the measurements which are included in this list are via *Wikipedia.org*.)

There are 43560(9) sq ft in an acre.
A fathom is 6(6) ft.
A cubit is 18(9) in.
A finger (cloth) is 4.5(9) in.
A barrel (imperial) is 36(9) gal.
A barrel (US dry) is 105(6) qt.
A board-foot is 144(9) cu in.
A butt (wine) is 126(9) gal.
A gallon (US fluid) is 231(6) cu in.
A minim (imperial) is 1/480(3) of a fl oz..
A pinch (imperial) is 1/192(3) gi (imperial).
A square perch is 16.5(3) ft.
A teaspoon (US) is 1/6(6) (US) fl oz.
A teaspoon (Canadian) 1/6(6) fl oz. (imperial).
A tun (wine) is 252(9) gal.
A pica is 12(3) points.
A span is 9(9) in.
An octant is 45°(9).
A sextant is 60°(6).
A square degree is $(\pi/180(9))^2$ sr.
An arcminute is 1°/60(6).
An acre is 66(3) ft by 660(3) ft.
A cable length is 720(9) ft (US).
An ell is 45(9) in (English).
A nail (cloth) is 2.25(9) in.
A barrel (petroleum) is 42(6) gal.
A barrel (US fluid) is 31.5(9) gal.
A palm is 3(3) in.
A firkin is 9(9) (US) gal.
A jigger is 1.5(6) fl. oz.
A minim (imperial) is1/60(6) of a fluidram.
A pinch (US) is 1/48(3) of a US fl. oz.
A pony is .75(3) US fl. oz.
A tablespoon is 15(6) ml.
A teaspoon (imperial) is 1/24(6) gi. (imperial).
A kilderkin (imperial) is 18(9) gal.
A rod is 16.5(3) ft.
A twip is 1/1440(9).
A quadrant is 90°(9).
A sign is 30°(3).
A barleycorn is 1/3(3) in.
An arcsecond is 1°/3600(9).