Chapter One: "Cousins and Decimals"

In this chapter, we will be working with 'Decimal Numbers', which in relation to Quantum Mathematics, are treated as though they are ordinary multiple-digit Numbers, as was explained in "Chapter Zero". In the first section of this chapter, we will be using the 'Halving Pattern' which was seen in "Chapter Zero", in order to examine the manner in which non-repeating, finite 'Decimal Numbers' relate to the overall concept of 'Cousin Numbers'. While the correlation between 'Decimal Numbers' and 'Cousin Numbers' also involves the concepts of the Quality and the Quantity of a Number, which means that this chapter will also allow us the opportunity to gain a better understanding of those two interrelated concepts (with the concepts of Quality and Quantity having been explained briefly in "Chapter Zero"). The multiple iterations of the '/2 Division Function' which we will be performing on the 1 will yield a series of quotients whose Qualities and condensed Quantities display a Mirrored pair of '1,2,4,8,7,5 Core Groups', as is shown and explained below, starting with the first iteration of the '/2 Division Function', which involves the Function of "1/2".

1
/ \
.5(5) .5(5)

Above, we can see that the Function of "1/2" yields two separate non-repeating 'Decimal Number' quotients, each of which condenses to the 5. This means that this particular '/2 Division Function' yields a 'Quantity Of Two' quotients, each of which possesses a 'Quality Of 5'. (To clarify, while traditional Mathematics would not allow us to yield two 5's from a lone 1, in relation to Quantum Mathematics, "1/2=.5(5)", which means that yielding two condensed 5's from a lone 1 is not a problem, nor would be the yielding of a condensed 1 from the Addition of two 5's, in that "5+5=10(1)".)

Next, we will perform two additional iterations of the '/2 Division Function', both of which are included in the chart which is shown below (with these two iterations of the '/2 Division Function' shown beneath the Function of "1/2" which was examined a moment ago, and with the Quantities and the Qualities of the quotients all highlighted in an arbitrary color code which is explained below the chart). (Also, it should be noted that within this chart, the Quantities are all represented digitally, as will be the case whenever a Quantity is included in a Function, as is the case here, as can be seen to the far-right of the chart.)

Quantity 1 Quality 1 1(1) (1X1= 1(1))
/ \
Quantity 2 Quality 5 .5(5) .5(5) (2X5=10(1))
/ \ / \
Quantity 4 Quality 7 .25(7) .25(7) .25(7) .25(7) (4X7=28(1))
/ \ / \ / \ / \
Quantity 8 Quality 8 .125(8) .125(8) .125(8) .125(8) .125(8) .125(8) .125(8) .125(8) (8X8=64(1))

Above, on the left side of the chart, we can see that the initial instance of the 1 involves a 'Quantity Of One' and a 'Quality Of 1', with this Quantity and Quality involving two instances of the 'Self-Cousin 1'. (In this case, the Quantity and the Quality of the quotient are highlighted arbitrarily in green and red (respectively), as will be the case throughout this chapter.) While below this initial 1, we can see that the Function of "1/2" yields a 'Quantity Of Two' quotients, each of which possesses a 'Quality Of 5', with this Quantity and Quality involving an instance of the '2/5 Cousins'. Next, below the two quotients of **.**5, we can see that the second iteration of the Function of "1/2" yields a 'Quantity Of Four' quotients, each of which possesses a 'Quality of 7' (as "2+5=7"), with this Quantity and Quality involving an instance of the '4/7 Cousins'. Then, below the four quotients of **.**25, we can see that the third iteration of the Function of "1/2" yields a 'Quantity Of Eight' quotients, each of which possesses a 'Quality Of 8' (as "1+2+5=8"), with this Quality and Quantity involving two instances of the 'Self-Cousin 8'. (The four 'Multiplication Functions' which are shown to the right of the chart will be explained in the next section of this chapter.)

In the chart which is seen above, the two instances of traditional Cousin pairs (these being the 2/5 and 4/7 Cousins) are framed on the top and the bottom by two instances of the '1/8 Sibling/Self-Cousins', which in this case are grouped together as two pairs of 'Self-Cousins' (with this behavior being due to the previously established uniqueness of the '1/8 Sibling/Self-Cousins'). This overall behavior is typical of the Cousins, in that the traditional Cousins will usually be seen paired together (such as 2/5, 3/6, and 4/7), while the 'Self-Cousins' will usually be seen paired individually (such as 1/1 and 8/8).

Next, we will perform three more iterations of the '/2 Division Function', all of which are included in the chart which is shown below (in this case, the chart is shown condensed due to a lack of space). (While the nine 'Multiplication Functions' which are shown to the right of the condensed chart will be explained in the next section of this chapter.)

non-condensed values

Quantity 16(7)	Quality 4	16 of **.**0625	(16X4=64(1), 16X13= 208(1), 7X13=91(1))
Quantity 32(5)	Quality 2	32 of **.**03125	(32X2=64(1), 32X11= 352(1), 5X11=55(1))
Quantity 64(1)	Quality 1	64 of **.**015625	(64X1=64(1), 64X19=1216(1), 1X19=19(1))

Above, in the center of the chart, we can see the three quotients which complete one full six-iteration "Cycle" of this particular 'Halving Pattern'. While in looking at the condensed Quantities and Qualities of the quotients (all of which are shown to the left of the chart, and highlighted arbitrarily in green and red, respectively), we can see that they involve two instances of traditional Cousin pairs (these being the 2/5 and 4/7 Cousins), along with a pair of 'Self-Cousin 1's'. Also, we can see that the orientations of the two pairs of traditional Cousins display Mirroring in relation to those of the two pairs of traditional Cousins which were contained within the Quantities and Qualities which were seen in relation to the previous example, both individually (from 2/5 to 5/2, and from 4/7 to 7/4) as well as collectively (from the order of 2/5 followed by 4/7 to the order of 4/7 followed by 2/5). While this pair of '1/1 Self-Cousins' displays orientational Mirroring in relation to the pair of '1/1 Self-Cousins' which was seen in relation to the previous example, in that it is oriented below the two instances of traditional Cousin pairs (where as in relation to the previous example, the'1/1 Self-Cousins' were oriented above the two instances of traditional Cousin pairs). (While it should also be noted that the lone pair of '8/8 Self-Cousins' which is contained within this overall selection of Quantities and Qualities displays an orientational form of 'Self-Mirroring', in that it is oriented in the vertical middle of all of the other instances of Cousin pairs, as can be seen at the bottom of the previous chart.) These various condensed Quantities and Qualities form two orientationally Mirrored instances of a repeating '1,2,4,8,7,5 Core Group' pattern, one of which is displayed by the condensed values of the Quantities (this being 1,2,4,8,7,5,1,..., which runs from top to bottom, and is highlighted arbitrarily in red), and the other of which is displayed by the Qualities (this being 1,5,7,8,4,2,1,..., which which runs from top to bottom, and is highlighted arbitrarily in green). (It should be noted that the repeating '1,2,4,8,7,5 Core Group' patterns which are displayed by these condensed Quantities and Qualities both maintain to Infinite iterations.)

(It should also be noted that the overall concept of Cycles will be seen again in "Chapter 3: Dividing by the 3", and will eventually be explained in "Chapter 6: Dividing by the 6".)

At this point, I am not sure if the overall 'Decimal Number' characteristic which was examined in this section is the root cause of the 'Cousin Relationship' which is maintained between various pairs of 'Base Numbers', though it is as far back as I have been able to trace the origins of the 'Cousin Relationship' thus far.

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Next, we will explore the characteristic which is indicated by the condensed values of the products which are yielded by the 'Multiplication Functions' which are shown to the right of the charts which were seen in the previous section (all of which are highlighted arbitrarily in blue). The specific condensed Quantities and Qualities which we have been working with throughout this chapter also (coincidentally) indicate other characteristics which are displayed by the various pairs of 'Cousin Numbers', one of these being the characteristic which involves the fact that the Cousin pairs all Multiply by one another (individually) to yield non-condensed products which condense to the 1 (with the exception of the '3/6 Sibling/Cousins', which Multiply to a non-condensed product which condenses to the 9, in that "3X6=18(9)"). (This condensed 1 characteristic will be seen again briefly in "Chapter Four: Cousin Quirks", and will eventually be explained in "Interlude Two (Hundred And Seventy-Three): Quantum Mathematics and the Modern Gregorian Calendar".) While in this particular case, this condensed 1 characteristic is also coincidentally indicative of the unrelated characteristic of "Conserved Quality Conservation", as is explained below.

We began the 'Halving Pattern' with the 1, which possesses a 'Quality Of 1', and involves a 'Quantity Of One' (in that it is one lone Number). In the current context, the concepts of the Quality and the Quantity of a Number involve the condensed value of a Number (which is the Quality of the Number), along with how many "Matching" instances of the Number we are currently working with (which is the Quantity of the Number). It is the Multiplication of these two values (by one another) which yields the Conserved Quality of the Number, in that "Quality X Quantity = Conserved Quality". While in this case, these Conserved Qualities maintain 'Conserved Quality Conservation', as can be seen in relation to the condensed values of the products which are yielded by the 'Multiplication Functions' which are shown to the right of two of the charts which were seen in the previous section (all of which are highlighted arbitrarily in blue). The 1 which begins the 'Halving Pattern' possesses a 'Quality Of 1' along with a 'Quantity Of One', which together yield a 'Conserved Quality Of 1', in that "1X1=1(1)". While the two non-condensed quotients of .5 which are yielded by the Function of "1/2" each possess a

'Quality Of 5', and together involve a 'Quantity Of Two', with these two values Multiplying to a product which involves a (Conserved) 'Conserved Quality Of 1', in that "5X2=10(1)".

(To clarify two of the terms which were used a moment ago, the term *Matching* will be ubiquitous throughout these chapters, and will always be used in reference to a simple and intuitive concept which can be considered to be the opposite of Mirroring. While the term *Conservation* will also be used throughout many of these chapters, and will generally refer to a balance, or in this case an invariance, in that throughout these examples, the unique 'Multiplication Functions' which involve factors which condense to values which are Cousins (or 'Self-Cousins') of one another have all yielded non-condensed products which condense to the 1.)

As was just mentioned, the second 'Conserved Quality Of 1' (that of the two non-condensed quotients of .5) is itself Conserved, in that it displays Matching in relation to the first 'Conserved Quality Of 1' (that of the 1 with which we started). This Conservation of the Conserved Qualities will maintain to Infinite iterations of the '/2 Division Function', as can be seen in the condensed values of the products which are yielded by the Functions which involve the Multiplication of the Qualities and the condensed Quantities of the quotients which are yielded by the six '/2 Division Functions' which yield the 'Halving Pattern' (all of which involve 1's, as can be seen to the right of the charts which were examined in the previous section). While the various 'Multiplication Functions' which are shown to the right of the three individual examples which are contained within the last of the charts indicate that this condensed 1 characteristic maintains whether we use the condensed or non-condensed values (or both) for the individual factors. (Also, it should be noted that the differences between the non-condensed products which are yielded by the Multiplication of the non-condensed values of the 'Decimal Number' quotients by their non-condensed Quantities all condense to the 9, in that "1216-352=864(9)", "352-208=144(9)", "208-64=144(9)", "64-28=36(9)", "28-10=18(9)", and "10-1=9(9)".)

The Matching which is displayed between these condensed products indicates an overall characteristic which is displayed by all of the single and multiple digit Numbers in existence, this being that any Number which is Divided into Matching quotients will always maintain 'Conserved Quality Conservation' (as is also the case in relation to the Division of groups of Matching Numbers), as is shown and explained below.

To start, we will Halve all of the "Even" instances of 'Base Numbers' down to their respective first instances of "Prime" quotients, as is shown below (with the Quantities and Qualities all highlighted arbitrarily in green and red, respectively).

```
      8            (1X8=8(8))    6      (1X6=6(6))    4      (1X4=4(4))     2     (1X2=2(2))
    /   \                       / \                  / \                   / \
   4     4         (2X4=8(8))   3 3     (2X3=6(6))   2  2   (2X2=4(4))    1 1   (2X1=2(2))
  / \   / \                                         / \ / \
 2  2   2  2       (4X2=8(8))                       1 1 1 1 (4X1=4(4))
 /\  /\  /\  /\
1 1 1 1 1 1 1 1    (8X1=8(8))
```

Above, we can see that each of these four individual examples maintains the characteristic of 'Conserved Quality Conservation', as is indicated by the Matching condensed values of the vertically aligned products (all of which are highlighted arbitrarily in blue).

While the characteristic of 'Conserved Quality Conservation' will also maintain into non-repeating 'Decimal Number' quotients, as can be seen in relation to the two alternate examples which are shown below (both of which involve "Odd" instances of 'Base Numbers').

```
              7                  (7X1=  7(7))                   5                (5X1=  5(5))
          /       \                                          /     \
    3.5(8)          3.5(8)       (8X2= 16(7))          2.5(7)        2.5(7)      (7X2=14(5))
   /      \        /      \                           /     \       /     \
1.75(4) 1.75(4) 1.75(4) 1.75(4)  (4X4 =16(7))   1.25(8) 1.25(8) 1.25(8) 1.25(8)  (4X8=32(5))
```

Above, we can see that these two examples both maintain the characteristic of 'Conserved Quality Conservation', as is indicated by the Matching condensed values of the vertically aligned products which are yielded by the Multiplication of the Qualities and the Quantities of the various 'Decimal Number' quotients (all of which are highlighted arbitrarily in blue). (In situations such as these, which involve finite 'Decimal Numbers', the "Whole Number" is included when determining the condensed value of the overall Number. This will not be the case in relation to "Infinitely Repeating Decimal Numbers", as will be explained in "Chapter Two: Infinitely Repeating Decimal Numbers".)

(To clarify the pair of interrelated terms which was used a moment ago, the terms *Even* and *Odd* refer to important oppositional qualities which are displayed by Numbers. Though unfortunately, the specifics of these qualities will not be covered in this book. However, for our current purposes, these terms can be considered to have the same traditional and Quantum Mathematical meaning, as is also the case in relation to the term *Prime* which was used a moment ago. Unfortunately, the concept of 'Prime Numbers' in relation to Quantum Mathematics will also not be covered in this book, though 'Prime Numbers' will be briefly encountered in the endnotes of "Chapter 6**.**9: Tossing Stones".)

However, the characteristic of 'Conserved Quality Conservation' does not maintain in relation to sets of quotients which do not display Matching between one another, as can be seen in the arbitrary example which is shown below.

```
  7
 / \
6   1
5   2
4   3
```

Above, we can see that with the exception of Adding these individual pairs of quotients back together again, there is no manner (Multiplicative or otherwise) in which we can yield the requisite value of 7. This indicates that the each of the groups of quotients must display Matching between one another (individually) in order for this particular form of 'Conserved Quality Conservation' to be maintained.

That brings this section, and therefore this chapter, to a close.