Quantum Mathematics and the Standard Model of Physics Part Two:
"Reciprocal Mirroring"

In Chapter 3, we examined the repetition patterns which are contained within the infinitely repeating decimal number quotients which are yielded by the repeated iterations of the function "1/3". While in this Standard Model of physics themed chapter, we will be performing repeated iterations of other division functions, such as "1/2", "3/4", "4/5", etc., most of which will yield finite, non-repeating decimal number quotients, with the overall concept of non-repeating decimal numbers and their condensed values having been explained in Chapter One. It is the pattern which arises in the condensed values of the quotients which are yielded by repeated iterations of "/X" which we will be working with in this chapter, with the "X" indicating whatever divisor we happen to be working with at the time, and these patterns will be referred to as "iteration patterns". (Or, to put all of that a bit more simply, in this chapter, we will be working with iteration patterns, with these being the patterns which arise in the condensed values of the non-repeating decimal number quotients which are yielded by multiple iterations of the function "/X".)

While in this chapter, we will also get our first look at an extension of the previously established form of reciprocity which is displayed between cousins, one which involves the reciprocal mirroring which is displayed between the (X / /) sibling functions in relation to cousin numbers. This specific form of reciprocal mirroring involves the fact that in relation to each of the instances of non-3/6 cousins, a function which involves division by one of the numbers in the cousin pair is equivalent to a function which involves multiplication by the other (or an octave of the other), examples of which will be seen throughout this chapter. (To clarify, the previously established reciprocity which is displayed between cousin numbers involves the fact that each of the non-3/6 cousin pairs displays multiplicative reciprocity between one another around the 1, as was explained in Interlude Two (Hundred And Seventy-Three).)

Throughout this chapter, we will be working with a variety of charts, each of which will involve the division of each of the base numbers by the same individual non-3,6,9 family group member base number. (This means that these lists will involve the individual numbers which are contained within the base set all repeatedly divided by the 1, the individual numbers which are contained within the base set all repeatedly divided by the 2, the individual numbers which are contained within the base set all repeatedly divided by the 4, etc. .) Considering that the repeated division or multiplication of any number by the 1 will yield a series of solutions which display matching in relation to the original number, we will skip the 1 and start instead by dividing all of the base numbers by the 2. (Though before we begin, it should be noted that the behavioral matching which is displayed by the quotients which are yielded by repeated iterations of the" /1" division function is indicative of the fact that the 1 displays self-cousin matching in relation to the (X / /) sibling functions, in that multiplication or division by the 1 yields the same result, this being no change. While a similar form of self-cousin matching is displayed by the 8 in relation to the (X / /) sibling functions, as will be seen towards the end of this chapter.)

In the first of the charts which we will be working with in this chapter, we will see that the division of any number by the 2 is equivalent to the multiplication of that same number by the 5, at least in terms of the condensed values of the solutions which these functions yield. (This is also true in relation to the non-condensed values of the solutions which these functions yield, if we disregard the decimal points and 0's.) Three arbitrary examples of this form of matching are shown below, with the three pairs of matching condensed solutions all highlighted arbitrarily in blue.

1/2= **.**5(5) and 1X5= 5(5)
2/2=1 (1) and 2X5=10(1)
3/2=1**.**5(6) and 3X5=15(6)

Above, we can see that the three instances of horizontally aligned condensed values all display matching between one another (individually), as do the instances of horizontally aligned non-condensed solutions, if we disregard the decimal points and 0's.

Throughout the upcoming charts, each of the base numbers will be shown through six iterations of its division function, with the non-condensed quotients which are yielded by these six iterations listed one beneath the other. While the condensed values of the quotients will be listed to the right of each of the non-condensed quotients, and together will form the iteration pattern, which runs from top to bottom. (It should be noted that all of the iteration patterns which will be seen in this chapter will repeat to infinity.)

Also, it should be noted at this point that base numbers which are multiples of one another, for example, the 2, the 4, and the 8, yield iteration patterns which display shifted matching between one another. For example, the function "4/2" yields a quotient of 2, which means that additional iterations of the function "4/2" will yield quotients which display matching in relation to those which are yielded by the function "2/2". Furthermore, the function "8/2" yields a quotient of 4, which means that additional iterations of the function "8/2" will yield quotients which display matching in relation to those which are yielded by the function "4/2", which we have determined will display matching in relation to those which are yielded by the function "2/2". Therefore, those redundant multiples (and their shifted iteration patterns) will not be listed, except in relation to the 3/6 sibling/cousins, as their iteration patterns display unique forms of mirroring between one another.

With all of that said, we will start by dividing each of the base numbers repeatedly by the 2, as is shown below. (In the chart which is shown below, the functions which involve members of the 3,6,9 family group are all listed towards the bottom of the chart, as will be the case in relation to all of the charts which will be seen in this chapter.)

1/2= (Also 2/2, 4/2, and 8/2, as is explained above.)

.5 (condenses to)	(5)
.25	(7)
.125	(8)
.0625	(4)
.03125	(2)
.015625	(1)

5/2=

2.5 (condenses to)	(7)
1.25	(8)
.625	(4)
.3125	(2)
.15625	(1)
.078125	(5)

....

7/2=

3.5	(8)
1.75	(4)
.875	(2)
.4375	(1)
.21875	(5)
.109375	(7)

9/2=

4.5	(9)
2.25	(9)
1.125	(9)
.5625	(9)
.28125	(9)
.140625	(9)

....

3/2=

1.5	(6)
.75	(3)
.375	(6)
.1875	(3)
.09375	(6)
.046875	(3)

6/2=

3	(3)
1.5	(6)
.75	(3)
.375	(6)
.1875	(3)
.09375	(6)

Above, we can see that when the 1,2,4,8,7,5 core group members are divided repeatedly by the 2, they yield iteration patterns which display shifted matching between one another, in that all six of these iteration patterns involve inverted instances of the 1,2,4,8,7,5 core group, five of which are shifted. While we can see that when the 3,6,9 core group members are divided repeatedly by the 2, their iteration patterns display two separate forms of sibling/cousin mirroring between one another, in that the iteration patterns of the 3 and the 6 display a form of sibling/cousin mirroring between one another, with the iteration pattern of the 3 involving a repeating 6,3,... pattern, and the iteration pattern of the 6 involving a repeating 3,6,... pattern, and the iteration pattern of the 9 displays a form of self-sibling/cousin mirroring, in that it exclusively involves instances of the self-sibling/cousin 9.

Also, in examining the non-condensed and condensed quotients which are contained within the chart which is seen above, we can see the form of reciprocal mirroring which is displayed between cousin numbers in relation to the (X / /) sibling functions, in that in relation to quantum mathematics, the "/2" division function is equivalent to the "X5" multiplication function, with the function numbers of 2 and

5 being cousins of one another. This means that we can change any of the "/2" division functions which are seen above into an "X5" multiplication function, and the solution, disregarding the decimal point and any 0's, will be the same, in both non-condensed and condensed form. An arbitrary example of this form of reciprocal mirroring is explained below.

The non-condensed quotients which are yielded by the first six iterations of the function "1/2" are shown (again) below, to the left of the non-condensed products which are yielded by the first six iterations of the function "1X5".

"/2" division function	**"X5" multiplication function**
.5, **.**25, **.**125, **.**0625, **.**03125, **.**015625	5, 25, 125, 625, 3125, 15625

Above, we can see that disregarding all of the 0's and decimal points, these two lists involve the same six single and multiple digit numbers, these being 5, 25, 125, 625, 3125, and 15625.

The reciprocal mirroring which is displayed between cousin numbers in relation to the (X **/** /) sibling functions will be seen throughout this chapter, and will be examined more thoroughly in "Quantum Mathematics and the Standard Model of Physics Part Three: 'Collective Multiplication and Division Functions' ". (While a similar form of reciprocal mirroring which is displayed between sibling numbers in relation to the (+/-) sibling functions will be seen in upcoming Standard Model of physics themed chapters.)

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We will be disregarding the "/3" division function in this chapter, due in part to the fact it has already been examined in "Chapter 3". While throughout this chapter, we will also be disregarding the "/6" division function, which will be examined in "Chapter 6: Dividing by the 6", as well as the "/9" division function, which is an important and unique function which will be examined more thoroughly as we work our way through this book. (Our disregarding of these three overall functions is due to the fact that the individual functions which involve division by a member of the 3,6,9 family group are all invalid functions which yield infinitely repeating decimal number quotients which would be of no immediate use to us here.)

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Next, we will divide each of the base numbers repeatedly by the 4, as is shown below.

1/4= (Also 4/4)	
.25	(7)
.0625	(4)
.15625	(1)
.00390625	(7)
.0009765625	(4)
.000244140625	(1)

2/4= (Also 8/4)	
.5	(5)
.125	(8)
.03125	(2)
.0078125	(5)
.001953125	(8)
.00048828125	(2)

....

5/4=	
1.25	(8)
.3125	(2)
.078125	(5)
.01953125	(8)
.0048828125	(2)
.001220703125	(5)

7/4=	
1.75	(4)
.4375	(1)
.109375	(7)
.02734375	(4)
.0068359375	(1)
.001708984375	(7)

....

3/4=	
.75	(3)
.1875	(3)
.046875	(3)
.01171875	(3)
.0029296875	(3)
.000732421875	(3)

6/4=	
1.5	(6)
.375	(6)
.09375	(6)
.0234375	(6)
.005859375	(6)
.00146484375	(6)

....

9/4=	
2.25	(9)
.5625	(9)
.140625	(9)
.03515625	(9)
.0087890625	(9)
.002197265625	(9)

Above, we can see that when the 1,2,4,8,7,5 core group members are divided repeatedly by the 4, they display behaviors which vary according to their family group membership, in that the iteration patterns of the 1, the 4, and the 7 all involve inverted runs of the 1,4,7 family group, two of which are shifted, and the iteration patterns of the 2, the 5, and the 8 all involve runs of the 2,5,8 family group, none of which are inverted, and two of which are shifted. While we can see that when the 3,6,9 core group members are divided repeatedly by the 4, their iteration patterns display two separate forms of sibling/cousin mirroring between one another, in that the iteration patterns of the 3 and the 6 display a form of sibling/cousin mirroring between one another, with the iteration pattern of the 3 exclusively involving 3's, and the iteration pattern of the 6 exclusively involving 6's, and the iteration pattern of the 9 displays a form of self-sibling/cousin mirroring, in that it exclusively involves instances of the self-sibling/cousin 9.

Also, in examining the non-condensed and condensed quotients which are contained within the chart which is seen above, we can see that the "/4" division function is equivalent to the "X25" multiplication function, which means that we can change any of the "/4" division functions which are seen above into a "X25" multiplication function, and the solution, disregarding the decimal point and any 0's, will be the same, in both non-condensed and condensed form. (To clarify, in this case, the multiple-digit number 25 is an octave of the 7, which is the cousin of the 4.)

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Next, we will divide each of the base numbers repeatedly by the 5, as is shown below.

1/5= (Also 2/5 and 5/5)

.2	(2)
.04	(4)
.08	(8)
.0016	(7)
.00032	(5)
.000064	(1)

4/5=

.8	(8)
.16	(7)
.032	(5)
.0064	(1)
.00128	(2)
.000256	(4)

....

7/5=

1.4	(5)
.28	(1)
.056	(2)
.0112	(4)
.00224	(8)
.000448	(7)

8/5=

1.6	(7)
.32	(5)
.064	(1)
.0128	(2)
.00256	(4)
.000512	(8)

....

3/5=

.6	(6)
.12	(3)
.024	(6)
.0048	(3)
.00096	(6)
.000192	(3)

6/5=

1.2	(3)
.24	(6)
.048	(3)
.0096	(6)
.00192	(3)
.000384	(6)

....

9/5=

1.8	(9)
.36	(9)
.072	(9)
.0144	(9)
.00288	(9)
.000576	(9)

Above, we can see that when the 1,2,4,8,7,5 core group members are divided repeatedly by the 5, they yield iteration patterns which display shifted matching between one another, in that all six of these iteration patterns involve instances of the 1,2,4,8,7,5 core group, five of which are shifted. While we can see that when the 3,6,9 core group members are divided repeatedly by the 5, their iteration patterns display two separate forms of sibling/cousin mirroring between one another, in that the iteration patterns of the 3 and the 6 display a form of sibling/cousin mirroring between one another, with the iteration pattern of the 3 involving a repeating 6,3,... pattern, and the iteration pattern of the 6 involving a repeating 3,6,... pattern, and the iteration pattern of the 9 displays a form of self-sibling/cousin mirroring, in that it exclusively involves instances of the self-sibling/cousin 9. (This all means that the "/5" division function displays an overall form of behavioral matching in relation to the "/2" division function, whose chart also contains iteration patterns which involve six instances of the 1,2,4,8,7,5 core group, one pair of sibling mirrored 6,3,... and 3,6,... patterns, and one pattern which consists exclusively of self-sibling/cousin 9's , as was seen earlier in this chapter.)

Also, in examining the non-condensed and condensed quotients which are contained within the chart which is seen above, we can see that the "/5" division function is equivalent to the "X2" multiplication function, which means that we can change any of the "/5" division functions which are seen above into an "X2" multiplication function, and the solution, disregarding the decimal point and any 0's, will be the same, in both non-condensed and condensed form.

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Next, we will examine the "/7" division function, which is a unique function, in that the 7 is the only member of the 1,2,4,8,7,5 core group which does not divide the other base numbers into whole and/or non-repeating decimal number quotients. Instead, the 7 divides the other base numbers into infinitely repeating decimal number quotients, all of which contain repetition patterns which involve instances of the enneagram pattern, most of which are shifted. (This behavior is due to the fact that the "/7" division function is an invalid function, as was explained briefly in Chapter Two.) The enneagram pattern will be examined in "Chapter 7: Dividing by the 7", as well as its two sub-chapters, therefore in this chapter, we will simply list three iterations of each of the the repetition patterns which are contained within the infinitely repeating decimal number quotients which are yielded by the division of each of the base numbers by the 7, in order to note the various instances of the enneagram pattern of which they are comprised, after which we will move along to the "/8" division function. (As has been the case throughout these chapters, the first iteration of each of these repetition patterns will be highlighted in red, and followed by two more non-highlighted iterations, which will be separated by a "(*)", for clarity.)

1/7= **.**142857142857(*)142857...
2/7= **.**285714285714(*)285714...
3/7= **.**428571428571(*)428571...
4/7= **.**571428571428(*)571428...
5/7= **.**714285714285(*)714285...
6/7= **.**857142857142(*)857142...
7/7=1
8/7=1**.**142857142857(*)142857...
9/7=1**.**285714285714(*)285714...

Above, we can see that the function "1/7" yields an infinitely repeating decimal number quotient which contains a repetition pattern which involves a non-shifted instance of the enneagram pattern, while the functions "2/7", "3/7", "4/7", "5/7", and "6/7" all yield infinitely repeating decimal number quotients which contain repetition patterns which involve shifted variations on the enneagram pattern, and the function "7/7" yields a quotient which involves the whole number 1. Then there are the functions "8/7" and "9/7", which yield infinitely repeating decimal number quotients which display matching in relation to those which are yielded by the functions "1/7" and "2/7", respectively, only in each case, the infinitely repeating decimal number part of the overall quotient is preceded by the whole number 1.

Again, the "/7" division function will be examined in "Chapter 7: Dividing by the 7", as well as its two sub-chapters, therefore for now, we will just move along to the "/8" division function.

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Next, we will divide each of the base numbers repeatedly by the 8, as is shown below.

1/8= (Also 8/8)		2/8=	
.125	(8)	.25	(7)
.015625	(1)	.03125	(2)
.001953125	(8)	.00390625	(7)
.000244140625	(1)	.00048828125	(2)
.000030517578125	(8)	.00006103515625	(7)
.000003814697265625	(1)	.00000762939453125	(2)

....

4/8=		5/8=	
.5	(5)	.625	(4)
.0625	(4)	.078125	(5)
.0078125	(5)	.009765625	(4)
.0009765625	(4)	.001220703125	(5)
.0001220703125	(5)	.000152587890625	(4)
.0000152587890625	(4)	.000019073486328125	(5)

....

7/8=		6/8=	
.875	(2)	.75	(3)
.109375	(7)	.09375	(6)
.013671875	(2)	.01171875	(3)
.001708984375	(7)	.00146484375	(6)
.000213623046875	(2)	.00018310546875	(3)
.000026702880859375	(7)	.00002288818359375	(6)

....

3/8=		9/8=	
.375	(6)	1.125	(9)
.046875	(3)	.140625	(9)
.005859375	(6)	.017578125	(9)
.000732421875	(3)	.002197265625	(9)
.000091552734375	(6)	.000274658203125	(9)
.000011444091796875	(3)	.000034332275390625	(9)

Above, we can see that the "/8" division function displays unique behavior, in that it yields iteration patterns which exclusively involve instances of siblings. In relation to the 1,2,4,8,7,5 core group members, the division of the members of the 1/8 sibling/self-cousins by the 8 yields iteration patterns which involve the 1/8 sibling/self-cousins, the division of the members of the 2/7 siblings by the 8 yields iteration patterns which involve the 2/7 siblings, and the division of the members of the 4/5 siblings by the 8 yields iteration patterns which involve the 4/5 siblings. While we can see that when the 3,6,9 core group members are divided repeatedly by the 5, their iteration patterns display two separate forms of sibling/cousin mirroring between one another, in that the iteration patterns of the 3 and the 6 display a form of sibling/cousin mirroring between one another, with the iteration pattern of the 3 involving a repeating 6,3,... pattern, and the iteration pattern of the 6 involving a repeating 3,6,... pattern, and the iteration pattern of the 9 displays a form of self-sibling/cousin mirroring, in that it exclusively involves instances of the self-sibling/cousin 9.

Also, in examining the non-condensed and condensed quotients which are contained within the chart which is seen above, we can see that the "/8" division function is equivalent to multiplication by some variation on the multiple-digit number 125, such as **.**125, 1**.**25, 12**.**5, etc. . This means that we can change any of the "/8" division functions which are seen above into some variation on an "X125" multiplication function, and the solution, disregarding the decimal point and any 0's, will be the same, in both non-condensed and condensed form. (These variations on the multiple-digit number 125 are all octaves of the 8, which means that the "/8" division function displays a form of self-cousin matching in relation to the (X / /) sibling functions, as is also the case in relation to the "/1" division function which was skipped over in the first section of this chapter.)

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That brings this Standard Model of physics themed chapter to a close. In this chapter, we examined the iteration patterns which are yielded by the base numbers when they are repeatedly divided by the non-3,6,9 family group member base numbers, and determined that the iteration patterns which are yielded by the 1,2,4,8,7,5 core group members involve instances of the 1,2,4,8,7,5 core group, the 1,4,7 and 2,5,8 family groups, and the various non-3/6 sibling pairs, while the iteration patterns which are yielded by the 3,6,9 family group members display various forms of sibling/cousin mirroring between one another, in that the iteration patterns which are yielded by the members of the 3/6 sibling/cousins display various instances of sibling/cousin mirroring, as they involve 3's and 6's which are grouped as sibling/cousins as well as by matching numbers, while the iteration patterns which are yielded by the self-sibling/cousin 9 all display the same form of self-sibling/cousin mirroring, in that they all consist exclusively of instances of the self-sibling/cousin 9. (The unique characteristics which are displayed by the iteration patterns which are yielded by the 3,6,9 family group members when they are divided by the members of the 1,2,4,8,7,5 core group are due to the fact that all of the condensed values of which they are comprised are yielded via inter-family group division functions, each of which involves a dividend which maintains the 3,6,9 family group, along with a divisor which does not. The overall concept of inter-family group functions will be explained in upcoming Standard Model of physics themed chapters, as will the overall concept of intra-family group functions, which was encountered briefly in Interlude Three.)

While in this chapter, we also encountered the forms of reciprocal mirroring which are displayed by the non-3,6,9 family group member cousin numbers in relation to the (X / /) sibling functions. The confirmed specifics of these forms of reciprocal mirroring involve the fact that the self-cousin 1 displays reciprocal matching in relation to itself, in that the "/1" division function and the "X1" multiplication function are both no change functions, as does the self-cousin 8, in that the "/8" division function is equivalent to some variant of the "X125" multiplication function (with the multiple-digit number 125 being an octave of the 8), as well as the fact that the 2/5 cousins display a form of reciprocal mirroring between one another, in that the "/2" division function is equivalent to the "X5" multiplication function, and the "/5" division function is equivalent to the "X2" multiplication function. Though at this point, we cannot determine whether or not the 4/7 cousins display similar forms of reciprocal mirroring between one another, in that while we have determined that the "/4" division function is equivalent to the "X25" multiplication function (with the multiple-digit number 25 being an octave of the 7), at this point, the "/7" division function does not appear to be equivalent to the "X4" division function, in that the iterations of the function "1/7" all yield infinitely repeating decimal number quotients. (The "/7" division function does not appear to display matching in relation to the "X4" multiplication function due to the fact that our current understanding of the "/7" division function is limited. The specific instances of matching which are displayed between the condensed solutions which are yielded by the "X4" multiplication function and those which are yielded by the "/7" division function will be explained in "Chapter Eight: Solving the Invalid Functions", as will the specifics of the unique form of overall mirroring which is displayed between the "/4" division function and the "/7" division function.)

The overall concept of reciprocal mirroring will be seen again throughout the upcoming Standard Model of physics themed chapters. While the specific forms of reciprocal mirroring which were encountered in this chapter, specifically those which are displayed between the (X / /) sibling functions in relation to cousin numbers, will be examined more thoroughly in "Quantum Mathematics and the Standard Model of Physics Part Three: 'Collective Multiplication and Division Functions' ", as will those which are displayed between other instances of related numbers.