

Interlude Three: "Neighboring Numbers"

In this interlude, we will examine the base set, along with the two core groups and the three family groups, in order to examine the manners in which these selections of numbers display familial characteristics in relation to the solutions which are yielded by their various instances of dual neighboring numbers when they are involved in each of the four functions. (To clarify, the term "neighboring numbers" refers to any instances of numbers which are adjacent to one another, as was explained in Chapter 3.3. While the term "dual neighboring numbers" refers to the two numbers which are adjacent to either side of a center number.)

We will start by examining the base set of the numbers 1-9, which is shown below. (In this case, we are assuming that the base set is infinitely repeating, in that an assumed 1 follows the 9, and an assumed 9 precedes the 1, both of which are shown below in parentheses.)

(9) 1 2 3 4 5 6 7 8 9 (1)...

In examining the traditionally ordered base set which is seen above, we will see that the condensed solutions which are yielded by the dual neighboring numbers of the various base numbers display behaviors which separate out based on the core group membership of the center number, as will be shown and explained throughout the first section of this interlude.

To start, we can determine that in relation to the ordered arrangement of the base set, the addition of the dual neighboring numbers of the individual 1,2,4,8,7,5 core group members will always yield a sum whose condensed value involves the next number in that particular core group, as is shown below. (The example which is seen below involves family group highlighting, with this being the form of highlighting which will be used throughout the majority of this interlude.)

$$\begin{array}{ccccccc}
 11(2) & 8 & 14(5) & & & & \\
 / \quad \backslash & / \quad \backslash & / \quad \backslash & & & & \\
 (9) 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\
 & \backslash & / & \backslash & / & \backslash & / & & \\
 & & 4 & & 10(1) & & 16(7) & &
 \end{array}$$

Above, working from left to right, we can see that the addition of the dual neighboring numbers of the 1 yields a non-condensed sum which condenses to the 2, the addition of the dual neighboring numbers of the 2 yields a non-condensed sum of 4, and the addition of the dual neighboring numbers of the 4 yields a non-condensed sum of 8. Then, continuing from right to left, we can see that the addition of the dual neighboring numbers of the 8 yields a non-condensed sum which condenses to the 7, the addition of the dual neighboring numbers of the 7 yields a non-condensed sum which condenses to the 5, and the addition of the dual neighboring numbers of the 5 yields a non-condensed sum which condenses to the 1. (It should be noted at this point that throughout this interlude, we will be focusing exclusively on the condensed values of the solutions which are yielded by the various functions.) Also, it should be noted that the family group highlighting which is seen above indicates that in this case, the addition of the dual neighboring numbers of the members of the 1,4,7 family group yields non-condensed sums which condense exclusively to members of the 2,5,8 family group, while the addition of the dual

neighboring numbers of the members of the 2,5,8 family group yields non-condensed sums which condense exclusively to members of the 1,4,7 family group.

While the addition of the dual neighboring numbers of the 3,6,9 family group members which are contained within the ordered base set will always yield a sum whose condensed value displays sibling/cousin mirroring in relation to the center number, as is shown below.

$$\begin{array}{cccccccc}
 & & 6 & & 12(3) & & 9 & & \\
 & & / \ \backslash & & / \ \backslash & & / \ \backslash & & \\
 & & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & (1)
 \end{array}$$

Above, we can see that the addition of the dual neighboring numbers of the 3 yields a non-condensed sum of 6, the addition of the dual neighboring numbers of the 6 yields a non-condensed sum which condenses to the 3, and the addition of the dual neighboring numbers of the 9 yields a non-condensed sum of 9.

The behaviors which have been seen in relation to the previous two examples indicate that the two core groups collectively involve three unique infinitely repeating doubling patterns, two of which are intertwined. The first of these doubling patterns involves the 1,2,4,8,7,5 core group, as was explained briefly in Chapter Zero, in that the 1 doubles to the 2, the 2 doubles to the 4, the 4 doubles to the 8, the 8 doubles to 16(7), 16 doubles to 32(5), 32 doubles to 64(1), etc. . While the other two of these doubling patterns are intertwined within the 3,6,9 core group, in that the 3 doubles to the 6, the 6 doubles to 12(3), 12 doubles to 24(6), 24 doubles to 48(3), etc., while the 9 doubles to 18(9), 18 doubles to 36(9), 36 doubles to 72(9), etc. . This all means that in relation to the ordered base set, the addition of the dual neighboring numbers of any number will always yield a non-condensed sum whose condensed value is equal to that of the product which is yielded by the multiplication of the center number by the 2. This includes the 9, which is due to the fact that the dual neighboring numbers of the 9, these being the 8 and the 1, add to a non-condensed sum of 9, while a doubling of the 9 yields a non-condensed product which condenses to the 9, in that "9X2=18(9)". (This doubling behavior has to do with the overall concept of averages.)

Next, we will move on to the sibling function of the addition function, this being the subtraction function, which we will now perform on these same instances of dual neighboring numbers, as is shown below (in this example, the preceding 9 is indicated as the 0). (The term "sibling function" will be explained more thoroughly in a moment.)

$$\begin{array}{cccccccc}
 & & 2 & & 2 & & 2 & & 2 & & 7 & & \\
 & & / \ \backslash & & \\
 (0) & & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & (1) \\
 & & \ / & & \ / & & \ / & & \ / & & \ / & & \\
 & & 2 & & 2 & & 2 & & 2 & & & &
 \end{array}$$

Above, we can see that eight of these subtraction functions yield a difference of 2, while the function "8-1" yields a difference of 7, with this difference of 7 displaying sibling mirroring in relation to the differences of 2. (It should be noted that the differences which are seen above have all been yielded via functions which involve the subtraction of the lesser of the instance of dual neighboring numbers from the greater of that instance of dual neighboring numbers, as functions which involve the subtraction of

the greater of two values from the lesser of those two values would yield differences which possess a negative base charge, and at this point, we are not ready to work with negative base charged numbers.)

Next, before we perform the multiplication function on these same instances of dual neighboring numbers, we need to clarify an important term which was used a moment ago. The term "sibling function" refers to the two pairs of functions which are related (individually) through their polar opposition to one another. The first of the two pairs of sibling functions involves the functions of addition and subtraction, with this pair of sibling functions being referred to as the "(+/-) sibling functions", and the second of the two pairs of sibling functions involves the functions of multiplication and division, with this pair of sibling functions being referred to as the "(X / /) sibling functions". While these same four functions can also be grouped as two pairs of cousin functions, with the first of these two pairs of cousin functions involving the functions of addition and multiplication, with this pair of cousin functions being referred to as the "(+X) cousin functions", and the second of these two pairs of cousin functions involving the functions of subtraction and division, with this pair of cousin functions being referred to as the "(- / /) cousin functions". The two pairs of functions which we will be referring to as "sibling functions" are both related through their polar opposition to one another, as was mentioned a moment ago, while the two pairs of functions which we will be referring to as "cousin functions" are both related to one another (individually) in part via the characteristics of locality and non-locality, as is explained below. (To clarify, the sibling and cousin relationships which exist between the functions are not related to the sibling and cousin relationships which exist between the numbers, they simply involve the same arbitrary familial terms.)

In the previous example, we utilized the subtraction function, which possesses the quality of locality, in that the subtraction of a lesser number from a greater number will yield a different solution than an inverse function which involves the subtraction of the greater of those numbers from the lesser of those numbers, in that for example, the function "3-2" yields a difference of 1, while the function "2-3" yields a difference of -1. This characteristic of locality is also possessed by the division function, in that the function "3/2" yields a quotient of 1.5, while the function "2/3" yields a quotient of .6... . This leaves the addition function and the multiplication function, both of which possess the quality of non-locality, in that the function "3+2" yields a sum of 5, as does the function "2+3", and the function "2X3" yields a product of 6, as does the function "3X2". (The concepts of sibling functions, cousin functions, locality, and non-locality will be seen again throughout upcoming chapters, where they will all be explained more thoroughly.)

Next, we will perform the multiplication function on the dual neighboring numbers of the 1,2,4,8,7,5 core group members which are contained within the ordered base set, as is shown below.

$$\begin{array}{cccccc}
 18(9) & 15(6) & 48(3) & & & \\
 / \ \backslash & / \ \backslash & / \ \backslash & & & \\
 (9) & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\
 & \backslash & / & \backslash & / & \backslash & / & & & \\
 & & 3 & & 24(6) & & 63(9) & & &
 \end{array}$$

Above, we can see that each of these multiplication functions yields a non-condensed product which condenses to a member of the 3,6,9 family group. (This condensed 3,6,9 family group behavior arises due to the fact that all of these individual multiplication functions involve one factor which is a 3,6,9 family group member, and the members of the 3,6,9 family group all display attractive behavior in

relation to the multiplication function, as will be explained in upcoming Standard Model of physics themed chapters.)

Next, we will perform the multiplication function on the dual neighboring numbers of the 3,6,9 core group members which are contained within the ordered base set, as is shown below.

$$\begin{array}{cccccccc}
 & & 8 & & 35(8) & & 8 & \\
 & / & \backslash & / & \backslash & / & \backslash & \\
 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & (1)
 \end{array}$$

Above, we can see that each of these multiplication functions yields a non-condensed product which condenses to the 8.

Next, we will perform the division function on the dual neighboring numbers of the individual members of the base set. These nine functions will yield a series of quotients whose condensed values display various forms of mirroring and matching between one another, all of which are shown and explained below. (The next few examples involve an arbitrary color code which will be explained as we progress.)

We will start by dividing the rightmost of the numbers which are involved in each of these instances of dual neighboring numbers by the leftmost of the numbers which is involved in that particular instance of dual neighboring numbers. These various division functions will yield quotients which display cousin mirroring between one another in relation to center numbers which are cousins of one another, as is shown below. (Throughout these examples, the dual neighboring number functions will be preceded by their respective center numbers, which will be shown in parentheses, aligned into vertical cousin pairs, and highlighted in green. Also, it should be noted that four of these functions yield infinitely repeating decimal number quotients, three of which will be highlighted in red, and one of which will be highlighted in purple, as will be explained in a moment, while the condensed values of all nine of these quotients will be highlighted in blue.)

$$\begin{array}{ccccccccc}
 (1) & 2/9 = .22222222... & (9) & (2) & 3/1 = 3 & (3) & (3) & 4/2 = 2 & (2) & (4) & 5/3 = 1.6... & (6) \\
 (8) & 9/7 = 1.285714... & (9) & (5) & 6/4 = 1.5 & (6) & (6) & 7/5 = 1.4 & (5) & (7) & 8/6 = 1.3... & (3) & (9) & 1/8 = 1.25 & (8)
 \end{array}$$

Above, we can see that these nine division functions yield quotients whose condensed values display various forms of cousin mirroring between one another, in that the pair of functions which involve the dual neighboring numbers of the center numbers which are members of the 1/8 sibling/self-cousins yields infinitely repeating decimal number quotients which condense to a pair of self-sibling/cousin 9s, the pair of functions which involve the dual neighboring numbers of the center numbers which are members of the 2/5 cousins yields quotients which condense to an instance of the 3/6 sibling/cousins, the pair of functions which involve the dual neighboring numbers of the center numbers which are members of the 3/6 sibling/cousins yields quotients which condense to an instance of the 2/5 cousins, the pair of functions which involve the dual neighboring numbers of the center numbers which are members of the 4/7 cousins yields infinitely repeating decimal number quotients which condensed to an instance of the 3/6 sibling/cousins, and the function which involves the dual neighboring numbers of the self-sibling/cousin 9 yields a quotient which condenses to the self-cousin 8.

Before we move on, it should be noted that the examples which are seen above, as well as those which are seen below, involve a few infinitely repeating decimal number quotients, all of which are yielded by invalid functions. The specific parts of these infinitely repeating decimal number quotients which are used to arrive at their condensed values are all highlighted in red, with the exception of the quotient which is yielded by the "/7" division function, which involves a more complicated form of condensation, and is therefore highlighted in purple. The manners in which we arrive at the condensed and non-condensed values of the infinitely repeating decimal number quotients which are yielded by the various invalid functions will be explained in "Chapter Eight: Solving the Invalid Functions", therefore for now, we will simply continue on with this interlude working with the appropriate condensed values of these infinitely repeating decimal number quotients.

Next, we will divide the leftmost of the numbers which are involved in each of these instances of dual neighboring numbers by the rightmost of the numbers which is involved in that particular instance of dual neighboring numbers, as is shown below.

$$\begin{array}{l}
 (1) 9/2=4.5 \quad (9) \quad (2) 1/3=.3\dots(3) \quad (3) 2/4=.5 \quad (5) \quad (4) 3/5=.6 \quad (6) \\
 (8) 7/9= .77777777\dots(9) \quad (5) 4/6=.6\dots(6) \quad (6) 5/7=.714285\dots(2) \quad (7) 6/8=.75(3) \quad (9) 8/1=8(8)
 \end{array}$$

Above, we can see that these nine division functions yield quotients whose condensed values display forms of cousin mirroring which are similar to those which are displayed by the condensed quotients of the nine division functions which were seen in relation to the previous example, in that the pair of functions which involve the dual neighboring numbers of the center numbers which are members of the 1/8 sibling/self-cousins yields infinitely repeating decimal number quotients which condense to a pair of self-sibling/cousin 9's, the pair of functions which involve the dual neighboring numbers of the center numbers which are members of the 2/5 cousins yields quotients which condense to an instance of the 3/6 sibling/cousins, the pair of functions which involve the dual neighboring numbers of the center numbers which are members of the 3/6 sibling/cousins yields quotients which condense to an instance of the 2/5 cousins, the pair of functions which involve the dual neighboring numbers of the center numbers which are members of the 4/7 cousins yields infinitely repeating decimal number quotients which condense to an instance of the 3/6 sibling/cousins, and the function which involves the dual neighboring numbers of the self-sibling/cousin 9 yields a quotient which condenses to the self-cousin 8. (These nine condensed quotients display matching in relation to the condensed values of the nine quotients which were seen in relation to the previous example, with the exception of the 5/2 pair, which displays orientational mirroring in relation to the 2/5 pair which was seen in relation to the previous example.)

Also, it should be noted that these same condensed quotients display matching between one another in relation to center numbers which are siblings of one another, as is shown below, with these four individual functions all involving the division of the greater of the numbers which is involved in each of the instances of dual neighboring numbers by the lesser of the numbers which is involved in that instance of dual neighboring numbers. (To clarify, in relation to the examples which are seen below, the vertically aligned instances of green numbers are grouped by siblings, as opposed to the previous two examples, in which the vertically aligned instances of green numbers are grouped by cousins.)

$$\begin{array}{l}
 (2) 3/1=3 \quad (3) \quad (4) 5/3=1.6\dots(6) \\
 (7) 8/6=1.3\dots(3) \quad (5) 6/4=1.5 \quad (6)
 \end{array}$$

Above, we can see that the pair of functions which involve the dual neighboring numbers of the 2/7 siblings yields non-condensed quotients which condense to a pair of 3's, and the pair of functions which involve the dual neighboring numbers of the 4/5 siblings yields non-condensed quotients which condense to a pair of 6's.

While the functions which involve the division of the lesser of these instances of dual neighboring numbers by the greater of that instance of dual neighboring numbers yield non-condensed quotients whose condensed values display matching in relation to those which were seen in relation to the previous example, as is shown below.

$$\begin{array}{l} (2)1/3 = .\color{red}{3}\dots(\color{red}{3}) \quad (\color{blue}{4})3/5 = .\color{blue}{6} \quad (\color{blue}{6}) \\ (\color{green}{7})6/8 = .75 \quad (\color{green}{3}) \quad (\color{red}{5})4/6 = .\color{red}{6}\dots(\color{red}{6}) \end{array}$$

Above, we can see that these condensed quotients display matching in relation to those which are yielded by the four inverse division functions which were examined a moment ago. (The 1/8 sibling/self-cousins, the 3/6 sibling/cousins, and the self-sibling/cousin 9 are all some form of sibling/cousins, which means that there is no need for us to examine those examples as sibling pairs, as they have already been examined as cousin pairs.)

That completes this examination of the dual neighboring numbers of the individual members of the base set, and therefore brings this section to a close.

Next, we will perform each of the four functions on the dual neighboring numbers of the individual members of each of the two core groups. We will start with the 1,2,4,8,7,5 core group, first in its ordered arrangement of 1,2,4,5,7,8, and then in its traditional arrangement of 1,2,4,8,7,5, as is explained below. (It should be noted that as was the case in relation to the base set, these two core groups will be treated as infinitely repeating patterns.)

We will start by performing the addition function on the dual neighboring numbers of each of the numbers which are contained within the ordered arrangement of the 1,2,4,8,7,5 core group. These six functions will all yield non-condensed sums which condense to values which display cousin mirroring in relation to their respective center number, as is shown below, with the cousin pairs all highlighted in arbitrary colors.

$$\begin{array}{c} 10(\color{red}{1}) \quad \color{blue}{7} \quad 13(\color{blue}{4}) \\ / \quad \backslash \quad / \quad \backslash \quad / \quad \backslash \\ (\color{red}{8}) \quad \color{red}{1} \quad \color{red}{2} \quad \color{green}{4} \quad \color{green}{5} \quad \color{red}{7} \quad \color{red}{8} \quad (\color{red}{1}) \\ \backslash \quad / \quad \backslash \quad / \quad \backslash \quad / \\ \color{green}{5} \quad 11(\color{green}{2}) \quad \color{red}{8} \end{array}$$

Above, we can see that in relation to the ordered arrangement of the 1,2,4,8,7,5 core group, the addition of the the dual neighboring numbers of the 1 yields a non-condensed sum which condenses to the 1, the addition of the dual neighboring numbers of the 2 yields a non-condensed sum of 5, the addition of the dual neighboring numbers of the 4 yields a non-condensed sum of 7, the addition of the dual neighboring numbers of the 5 yields a non-condensed sum which condenses to the 2, the addition of the

dual neighboring numbers of the 7 yields a non-condensed sum which condenses to the 4, and the addition of the dual neighboring numbers of the 8 yields a non-condensed sum of 8.

Next, we will perform the subtraction function on these same instances of dual neighboring numbers, as is shown below. (It should be noted that these subtraction functions will all involve the subtraction of the lesser of an instance of dual neighboring numbers from the greater of that instance of dual neighboring numbers, in order to avoid negative base charged differences, as will be the case in relation to all of the subtraction functions which will be seen throughout the remainder of this interlude.)

$$\begin{array}{ccccccc}
 & 6 & 3 & & 3 & & \\
 & / & \backslash & / & \backslash & / & \backslash \\
 (8) & 1 & 2 & 4 & 5 & 7 & 8 (1) \\
 & \backslash & / & \backslash & / & \backslash & / \\
 & 3 & & 3 & & 6 &
 \end{array}$$

Above, we can see that each of these functions yields a non-condensed difference which is a member of the 3/6 sibling/cousins.

Next, we will perform the multiplication function on these same instances of dual neighboring numbers, as is shown below.

$$\begin{array}{ccccccc}
 & 16(7) & 10(1) & & 40(4) & & \\
 & / & \backslash & / & \backslash & / & \backslash \\
 (8) & 1 & 2 & 4 & 5 & 7 & 8 (1) \\
 & \backslash & / & \backslash & / & \backslash & / \\
 & 4 & 28(1) & & 7 & &
 \end{array}$$

Above, we can see that each of these functions yields a non-condensed product which condenses to a member of the 1,4,7 family group.

Next, we will perform the division function on these same instances of dual neighboring numbers, as is shown below. (This example exclusively involves division functions which involve the division of the greater of a pair of dual neighboring numbers by the lesser of that pair of dual neighboring numbers.)

$$\begin{array}{ccccccc}
 & 4 & 2.5(7) & & 1.6(7) & & \\
 & / & \backslash & / & \backslash & / & \backslash \\
 (8) & 1 & 2 & 4 & 5 & 7 & 8 (1) \\
 & \backslash & / & \backslash & / & \backslash & / \\
 & 4 & 1.75(4) & & 7 & &
 \end{array}$$

Above, we can see that each of these division functions yields a non-condensed quotient which condenses to a member of the 4/7 cousins.

Next, we will again perform the division function on these same instances of dual neighboring numbers, though this time around, we will be dividing the lesser of each of the pairs of dual neighboring numbers by the greater of that pair of dual neighboring numbers, as is shown below.

$$\begin{array}{ccccccc}
 .25(7) & .4(4) & .625(4) & & & & \\
 / \ \backslash & / \ \backslash & / \ \backslash & & & & \\
 (8) & 1 & 2 & 4 & 5 & 7 & 8 \ (1) \\
 \ \ / & \ \ / & \ \ / & & & & \\
 .25(7) & * & * & & & &
 \end{array}$$

Above, we can see that four of these six division functions yield non-condensed quotients which condense to a member of the 4/7 cousins, while two of these division functions yield infinitely repeating decimal number quotients which involve instances of the enneagram pattern, one of which is shifted, in that the function "1/7" yields the infinitely repeating decimal number quotient .142857..., which is indicated above by the "*", and the function "4/7" yields the infinitely repeating decimal number quotient .571428..., which is indicated above by the "*". (These two infinitely repeating decimal number quotients each condense to a member of the 4/7 cousins, as will be seen in "Chapter Eight: Solving the Invalid Functions".)

Next, we will perform the four functions on the dual neighboring numbers of the members of the traditionally ordered 1,2,4,8,7,5 core group, as is explained below.

We will start by performing the addition function the dual neighboring numbers of the members of the traditionally ordered 1,2,4,8,7,5 core group, as is shown below.

$$\begin{array}{ccccccc}
 7 & 10(1) & 13(4) & & & & \\
 / \ \backslash & / \ \backslash & / \ \backslash & & & & \\
 (5) & 1 & 2 & 4 & 8 & 7 & 5 \ (1) \\
 \ \ / & \ \ / & \ \ / & & & & \\
 5 & 11(2) & 8 & & & &
 \end{array}$$

Above, we can see that each of these addition functions yields a non-condensed sum which condenses to a value which maintains the family group of the center number.

Next, we will perform the subtraction function on these same instances of dual neighboring numbers, as is shown below.

$$\begin{array}{ccccccc}
 3 & 6 & 3 & & & & \\
 / \ \backslash & / \ \backslash & / \ \backslash & & & & \\
 (5) & 1 & 2 & 4 & 8 & 7 & 5 \ (1) \\
 \ \ / & \ \ / & \ \ / & & & & \\
 3 & 3 & 6 & & & &
 \end{array}$$

Above, we can see that each of these subtraction functions yields a non-condensed difference which involves a member of the 3/6 sibling/cousins, as was the case in relation to the subtraction of the dual neighboring numbers of the members of the ordered arrangement of the 1,2,4,8,7,5 core group. (This exclusivity of differences which maintain the 3,6,9 family group arises due to the fact that these two examples exclusively involve intra-family group subtraction functions. The overall concept of intra-family group functions will be encountered a few times throughout this interlude, and will eventually be explained more thoroughly in upcoming Standard Model of physics themed chapters.)

Next, we will perform the multiplication function on these same instances of dual neighboring numbers, as is shown below.

$$\begin{array}{ccccccc}
10(1) & 16(7) & 40(4) & & & & \\
/ & \backslash & / & \backslash & / & \backslash & \\
(5) & 1 & 2 & 4 & 8 & 7 & 5 (1) \\
& \backslash & / & \backslash & / & \backslash & / \\
& & 4 & 28(1) & 7 & &
\end{array}$$

Above, we can see that each of these functions yields a non-condensed product which condenses to a member of the 1,4,7 family group, as is also the case in relation to the multiplication of the various instances of dual neighboring numbers of the ordered arrangement of the 1,2,4,8,7,5 core group.

Next, we will perform the division function on these same instances of dual neighboring numbers, as is shown below. (This example exclusively involves division functions which involve the division of the greater of a pair of dual neighboring numbers by the lesser of that pair of dual neighboring numbers.)

$$\begin{array}{ccccccc}
2.5(7) & 4 & 1.6(7) & & & & \\
/ & \backslash & / & \backslash & / & \backslash & \\
(5) & 1 & 2 & 4 & 8 & 7 & 5 (1) \\
& \backslash & / & \backslash & / & \backslash & / \\
& & 4 & 1.75(4) & 7 & &
\end{array}$$

Above, we can see that each of these division functions yields a non-condensed quotient which condenses to a member of the 4/7 cousins.

Next, we will again perform the division function on these same instances of dual neighboring numbers, though this time around, we will be dividing the lesser of each of the pairs of dual neighboring numbers by the greater of that pair of dual neighboring numbers, as is shown below.

$$\begin{array}{ccccccc}
.4(4) & .25(7) & .625(4) & & & & \\
/ & \backslash & / & \backslash & / & \backslash & \\
(5) & 1 & 2 & 4 & 8 & 7 & 5 (1) \\
& \backslash & / & \backslash & / & \backslash & / \\
& & .25(7) & * & * & &
\end{array}$$

Above, we can see that four of these six division functions yield non-condensed quotients which condense to a member of the 4/7 cousins, while two of these division functions yield infinitely repeating decimal number quotients which involve instances of the enneagram pattern, one of which is shifted, in that the function "1/7" yields the infinitely repeating decimal number quotient .142857..., which is indicated above by the "*", and the function "4/7" yields the infinitely repeating decimal number quotient .571428..., which is indicated above by the "*". (These two infinitely repeating decimal number quotients each condense to a member of the 4/7 cousins, as was mentioned earlier in this section, in relation to the division of the various instances of dual neighboring numbers of the ordered arrangement of the 1,2,4,8,7,5 core group, which also yields non-condensed quotients which condense exclusively to members of the 4/7 cousins.)

Next, in order to complete our examination of the two core groups, we will perform each of the four functions on the dual neighboring numbers of the members of the 3,6,9 core group. This will also

function as a precocious examination of one of the three family groups, which is due to the fact that the 3,6,9 core group and the 3,6,9 family group involve the same three constituent numbers, as has been explained previously. (While unlike the 1,2,4,8,7,5 core group, the 3,6,9 core group will only be examined once, as its traditional arrangement is also its ordered arrangement.)

We will start by performing the addition function on the dual neighboring numbers of the members of the 3,6,9 core group, as is shown below.

$$\begin{array}{r}
 15(6) \ (9) \ 12(3) \\
 / \ \backslash \ / \ \backslash \ / \ \backslash \\
 (9) \ 3 \ 6 \ 9 \ 3 \ 6 \ 9 \ (3) \\
 \backslash \ / \ \backslash \ / \ \backslash \ / \\
 12(3) \ 15(6) \ 9
 \end{array}$$

Above, we can see that each of these addition functions yields a non-condensed sum which condenses to a member of the 3,6,9 family group.

Next, we will perform the subtraction function on these same instances of dual neighboring numbers, as is shown below.

$$\begin{array}{r}
 3 \ \ 3 \ \ 6 \\
 / \ \backslash \ / \ \backslash \ / \ \backslash \\
 (9) \ 3 \ 6 \ 9 \ 3 \ 6 \ 9 \ (3) \\
 \backslash \ / \ \backslash \ / \ \backslash \ / \\
 6 \ 3 \ 3
 \end{array}$$

Above, we can see that each of these subtraction functions yields a non-condensed difference which involves a member of the 3/6 sibling/cousins, as was the case in relation to the subtraction of the dual neighboring numbers of the members of the 1,2,4,8,7,5 core group, in both its standard and ordered arrangement. (Again, this exclusivity of differences which maintain the 3,6,9 family group arises due to the fact that this example exclusively involves intra-family group subtraction functions.)

Next, we will perform the multiplication function on these same instances of dual neighboring numbers, as is shown below.

$$\begin{array}{r}
 54(9) \ 18(9) \ 27(9) \\
 / \ \backslash \ / \ \backslash \ / \ \backslash \\
 (9) \ 3 \ 6 \ 9 \ 3 \ 6 \ 9 \ (3) \\
 \backslash \ / \ \backslash \ / \ \backslash \ / \\
 27(9) \ 54(9) \ 18(9)
 \end{array}$$

Above, we can see that each of these multiplication functions yields a non-condensed product which condenses to the 9.

Next, we will perform the division function on these same instances of dual neighboring numbers, as is shown below. (This example exclusively involves division functions which involve the division of the greater of a pair of dual neighboring numbers by the lesser of that pair of dual neighboring numbers.)

$$\begin{array}{r}
 1.5(6) \ 2 \ 3 \\
 / \ \backslash / \ \backslash / \ \backslash \\
 (9) \ 3 \ 6 \ 9 \ 3 \ 6 \ 9 \ (3) \\
 \backslash / \ \backslash / \ \backslash / \\
 3 \ 1.5(6) \ 2
 \end{array}$$

Above, we can see that four of these division functions yield non-condensed quotients which condense to a member of the 3/6 sibling/cousins, while two of these division functions appear to yield non-condensed quotients of 2. (The non-condensed quotient of 2 is the intuitive though incorrect solution to the invalid function "6/3", as will be explained along with the next example, which also involves two intuitive though incorrect solutions.)

Next, we will again perform the division function on these same instances of dual neighboring numbers, though this time around, we will be dividing the lesser of each of the pairs of dual neighboring numbers by the greater of that pair of dual neighboring numbers, as is shown below.

$$\begin{array}{r}
 .6...(6) \ .5(5) \ .3...(3) \\
 / \ \backslash / \ \backslash / \ \backslash \\
 (9) \ 3 \ 6 \ 9 \ 3 \ 6 \ 9 \ (3) \\
 \backslash / \ \backslash / \ \backslash / \\
 .3...(3) \ .6...(6) \ .5(5)
 \end{array}$$

Above, we can see that four of these division functions yield non-condensed quotients which condense to a member of the 3/6 sibling/cousins, while two of these division functions appear to yield non-condensed quotients of .5. As was the case in relation to the non-condensed quotients of 2 which were yielded by the two instances of the function "6/3" which were involved in the previous example, the non-condensed quotient of .5 is the intuitive though incorrect solution the invalid function "3/6". The incorrectness of these intuitive solutions has to do with the fact that the 3,6,9 family group members always multiply or divide to yield solutions whose condensed values maintain the 3,6,9 family group, as will be explained in "Chapter Eight: Solving the Invalid Functions".

At this point, we can determine that all of the intra-3,6,9 family group functions which have been seen in this section, with the seeming exception of the functions "6/3" and "3/6", have yielded non-condensed solutions which condense to a member of the 3,6,9 family group. This condensed 3,6,9 family group member exclusivity is due to an important characteristic which is displayed by the members of the 3,6,9 family group, as will be explained in upcoming Standard Model of physics themed chapters.

That completes this examination of the dual neighboring numbers of the members of the 1,2,4,8,7,5 and 3,6,9 core groups.

Next, we will perform the four functions on the dual neighboring numbers of the members of the 1,4,7 and 2,5,8 family groups, all of which is shown and explained below, starting with the 1,4,7 family group. (There is no need for us to examine the 3,6,9 family group, as it has already been examined as the 3,6,9 core group, as was mentioned earlier.)

To start, we will perform the addition function on the dual neighboring numbers of the members of the 1,4,7 family group, as is shown below.

$$\begin{array}{c}
 11(2) \ 5 \ 8 \\
 / \ \backslash / \ \backslash / \ \backslash \\
 (7) \ 1 \ 4 \ 7 \ 1 \ 4 \ 7 \ (1) \\
 \backslash / \ \backslash / \ \backslash / \\
 8 \ 11(2) \ 5
 \end{array}$$

Above, we can see that each of these addition functions yields a non-condensed sum which condenses to a member of the 2,5,8 family group.

Next, we will perform the subtraction function on these same instances of dual neighboring numbers, as is shown below.

$$\begin{array}{c}
 3 \ 3 \ 6 \\
 / \ \backslash / \ \backslash / \ \backslash \\
 (7) \ 1 \ 4 \ 7 \ 1 \ 4 \ 7 \ (1) \\
 \backslash / \ \backslash / \ \backslash / \\
 6 \ 3 \ 3
 \end{array}$$

Above, we can see that each of these subtraction functions yields a non-condensed difference which involves a member of the 3/6 sibling/cousins. (Again, this exclusivity of differences which maintain the 3,6,9 family group arises due to the fact that this example exclusively involves intra-family group subtraction functions.)

Next, we will perform the multiplication function on these same instances of dual neighboring numbers, as is shown below.

$$\begin{array}{c}
 28(1) \ 4 \ 7 \\
 / \ \backslash / \ \backslash / \ \backslash \\
 (7) \ 1 \ 4 \ 7 \ 1 \ 4 \ 7 \ (1) \\
 \backslash / \ \backslash / \ \backslash / \\
 7 \ 28(1) \ 4
 \end{array}$$

Above, we can see that each of these multiplication functions yields a non-condensed product which condenses to a member of the 1,4,7 family group.

Next, we will perform the division function on these same instances of dual neighboring numbers, as is shown below. (This example exclusively involves division functions which involve the division of the greater of a pair of dual neighboring numbers by the lesser of that pair of dual neighboring numbers.)

$$\begin{array}{c}
 1.75(4) \ 4 \ 7 \\
 / \ \backslash / \ \backslash / \ \backslash \\
 (7) \ 1 \ 4 \ 7 \ 1 \ 4 \ 7 \ (1) \\
 \backslash / \ \backslash / \ \backslash / \\
 7 \ 1.75(4) \ 4
 \end{array}$$

Above, we can see that each of these division functions yields a non-condensed quotient which condenses to a member of the 4/7 cousins.

Next, we will again perform the division function on these same instances of dual neighboring numbers, though this time around, we will be dividing the lesser of each of the pairs of dual neighboring numbers by the greater of that pair of dual neighboring numbers, as is shown below.

$$\begin{array}{c}
 * .25(7) * \\
 / \ \backslash / \ \backslash / \ \backslash \\
 (7) 1 \ 4 \ 7 \ 1 \ 4 \ 7 \ (1) \\
 \ \backslash / \ \backslash / \ \backslash / \ \backslash \\
 * \quad * \quad .25(7)
 \end{array}$$

Above, we can see that two of these six division functions yield non-condensed quotients which condense to a member of the 4/7 cousins, while four of these division functions yield infinitely repeating decimal number quotients which involve instances of the enneagram pattern, two of which are shifted, in that the function "1/7" yields the infinitely repeating decimal number quotient .142857..., which is indicated above by the two instances of the "*", and the function "4/7" yields the infinitely repeating decimal number quotient .571428..., which is indicated above by the two instances of the "*". (These two infinitely repeating decimal number quotients each condense to a member of the 4/7 cousins, as was mentioned earlier in this section.)

Next, we will perform the four functions on the dual neighboring numbers of the members of the 2,5,8 family group, as is explained below.

We will start by performing the addition function on the dual neighboring numbers of the members of the 2,5,8 family group, as is shown below.

$$\begin{array}{c}
 13(4) \ 7 \ 10(1) \\
 / \ \backslash / \ \backslash / \ \backslash \\
 (8) 2 \ 5 \ 8 \ 2 \ 5 \ 8 \ (2) \\
 \ \backslash / \ \backslash / \ \backslash / \ \backslash \\
 10(1) \ 13(4) \ 7
 \end{array}$$

Above, we can see that each of these addition functions yields a non-condensed sum which condenses to a member of the 1,4,7 family group.

Next, we will perform the subtraction function on these same instances of dual neighboring numbers, as is shown below.

$$\begin{array}{c}
 3 \ 3 \ 6 \\
 / \ \backslash / \ \backslash / \ \backslash \\
 (8) 2 \ 5 \ 8 \ 2 \ 5 \ 8 \ (2) \\
 \ \backslash / \ \backslash / \ \backslash / \ \backslash \\
 6 \ 3 \ 3
 \end{array}$$

Above, we can see that each of these subtraction functions yields a non-condensed difference which involves a member of the 3/6 sibling/cousins. (Again, this exclusivity of differences which maintain the

3,6,9 family group arises due to the fact that this example exclusively involves intra-family group subtraction functions.)

Next, we will perform the multiplication function on these same instances of dual neighboring numbers, as is shown below.

$$\begin{array}{r}
 40(4) \ 10(1) \ 16(7) \\
 / \ \backslash \ / \ \backslash \ / \ \backslash \\
 (8) \ 2 \ 5 \ 8 \ 2 \ 5 \ 8 \ (2) \\
 \ \backslash \ / \ \backslash \ / \ \backslash \ / \\
 16(7) \ 40(4) \ 10(1)
 \end{array}$$

Above, we can see that each of these multiplication functions yields a non-condensed product which condenses to a member of the 1,4,7 family group.

Next, we will perform the division function on these same instances of dual neighboring numbers, as is shown below. (This example exclusively involves division functions which involve the division of the greater of a pair of dual neighboring numbers by the lesser of that pair of dual neighboring numbers.)

$$\begin{array}{r}
 1.6(7) \ 2.5(7) \ 4 \\
 / \ \backslash \ / \ \backslash \ / \ \backslash \\
 (8) \ 2 \ 5 \ 8 \ 2 \ 5 \ 8 \ (2) \\
 \ \backslash \ / \ \backslash \ / \ \backslash \ / \\
 4 \ 1.6(7) \ 2.5(7)
 \end{array}$$

Above, we can see that each of these division functions yields a non-condensed quotient which condenses to a member of the 4/7 cousins.

Next, we will again perform the division function on these same instances of dual neighboring numbers, though this time around, we will be dividing the lesser of each of the pairs of dual neighboring numbers by the greater of that pair of dual neighboring numbers, as is shown below.

$$\begin{array}{r}
 .625(4) \ .4(4) \ .25(7) \\
 / \ \backslash \ / \ \backslash \ / \ \backslash \\
 (8) \ 2 \ 5 \ 8 \ 2 \ 5 \ 8 \ (2) \\
 \ \backslash \ / \ \backslash \ / \ \backslash \ / \\
 .25(7) \ .625(4) \ .4(4)
 \end{array}$$

Above, we can see that each of these division functions yields a non-condensed quotient which condenses to a member of the 4/7 cousins.

At this point, we can determine that in relation to all four of the functions, the dual neighboring numbers of the members of the 2,5,8 family group yield solutions which condense exclusively to members of the 1,4,7 family group. This behavior is indicative of the previously established connection which is maintained between the more passive 2,5,8 family group and the more dominant 1,4,7 family group.

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