

Quantum Mathematics and the Standard Model of Physics Part Five:  
"Color and Reactive Charges"

In "Quantum Mathematics and the Standard Model of Physics Part Four: An Examination of the Four Functions", we examined the 'Four Functions' in relation to 'Collective Functions'. While in this Standard Model of Physics themed chapter, in order to gain a better understanding of each of the 'Four Functions', we are going to take a closer look at these four Functions (individually), this time as "Complete Functions" (with the term '*Complete Function*' referring to a concept which will be explained in the second section of this chapter). Throughout this chapter, we will be focusing on the specifics of how each of the 'Four Functions' alters the 'Base Numbers' depending on which 'Base Number' and Function are involved in the overall "Interaction" (with the term *Interaction* referring to a concept which will be explained in a moment).

In the first section of this chapter, we will take a simple, "Physical" look at each of the 'Four Functions' (using some Quantum Mathematical marbles), in an attempt to determine what exactly each of these Functions is (or does). This will provide us with some idea as to what exactly is happening to the 'Base Numbers' when they are involved in each of the 'Four Functions'. (To clarify, the term *Physical* has roughly the same traditional and Quantum Mathematical meaning, and is being used here as a more tangible counter to the rather abstract concept of Mathematicality.)

To start, we will examine each of the '(+/-) Sibling Functions', starting with the 'Addition Function', which is explained below, using the arbitrary total Quantity of four individual marbles, which will start out split into two sets of two marbles each. (It should be mentioned at this point that each of these individual marbles can be considered to possess an inherent 'Quality Of 1', with the Quantum Mathematical concepts of the Quantity and Quality of a Number having been seen briefly in previous chapters.)

If we start with two sets of two marbles, one of which is set to the left and one of which is set to the right, and then Add the two marbles which are set to the right to the two marbles which are set to the left, this would leave us with one set of four marbles (all of which are set to the left), which would complete the Function of "2+2". (In this case, the Function involves one set of two marbles being Added to another set of two marbles, in order to yield one set of four marbles.) This particular '+2 Addition Function' is shown below, with "O's" representing the individual marbles.

OO <---OO  
yields  
OOOO

Above, we can see that this Function maintains Conservation in terms of Quantity as well as Quality, in that we started with a 'Quantity Of Four' separate marbles, each of which possessed a 'Quality Of 1', and ended with a 'Quantity Of Four' separate marbles, each of which possesses a 'Quality Of 1'. (This means that no marbles were created or destroyed through this Function.) While we can also determine that the Function of "2+2" maintains 'Conserved Quality Conservation', in that the Quality of the individual addends Multiplied by their Quantity yields a product which displays Matching in relation to that which is yielded by the Multiplication of the Quality of the sum by its Quantity, in that "2X2=4"

and "4X1=4". (The concept of 'Conserved Quality', as well as its Conservation, was explained in "Chapter One".)

Inversely, in relation to the 'Subtraction Function', if we take these same four marbles, which are now all set to the left, and Subtract two marbles by taking them from the left and moving them back over to the right, this would leave us with two marbles set to the left (along with another two marbles set to the right), which would complete the Function of "4-2". (In this case, the Function involves one set of two marbles being Subtracted from one set of four marbles.) This particular '-2 Subtraction Function' is shown below, with "O's" again representing the individual marbles.

OOOO  
yields  
OO --->OO

Above, we can see that this Function leaves us with one set of two marbles, along with another set of two (Subtracted) marbles, with the sum which is yielded by these Quantities Conserving the original total of four marbles, in that "2+2=4". (This means that no marbles were created or destroyed through this Function, as is also the case in relation to the 'Addition Function' which was examined a moment ago.) While we can also determine that the Function of "4-2" maintains Conservation in terms of both Quantity and Quality, in that four marbles (each of which possessed a 'Quality Of 1') have yielded four marbles (each of which possesses a 'Quality Of 1'), as well as 'Conserved Quality', in that "4X1=4" and "2X2=4".

In each of the examples which are seen above, some preexisting marbles (each of which possesses an inherent 'Quality Of 1') have been reoriented from one side to the other. The marbles were always there, we simply reoriented them in relation to one another, and then observed them as such. From a more removed perspective, it is clear to us that the Functions of "2+2" and "4-2" each maintain Conservation, in that they both involve four unchanging marbles. On a larger scale, the specific orientation of the marbles relative to one another is completely inconsequential. The four marbles were always there, no more and no less.

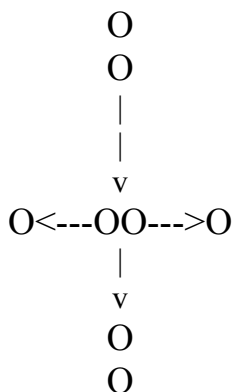
Next, we will examine the '(X / /) Sibling Functions', again using a series of Quantum Mathematical marbles, each of which again possesses an inherent 'Quality Of 1'. We will start with the 'Multiplication Function', which differs from the '(+/-) Sibling Functions', in that most individual 'Multiplication Functions' will not maintain Conservation. This can be seen in relation to the example which is shown and explained below, with this example involving the Multiplication of a set of four marbles by a set of two marbles.

OOOO <---OO  
yields  
OOOOOOOO

Above, we can see that while the Function of "4X2" does not maintain Conservation (in that it yields a Quantity of eight marbles from an initial Quantity of six marbles), the Quality of the individual marbles is Conserved, in that all of the marbles maintain an inherent 'Quality Of 1'. (While in this case, 'Conserved Quality Conservation' does not apply, as the Quantities of the two Multiplied sets of Marbles are not equal to one another.)

The example which is seen above indicates that the 'Multiplication Function' is the first of the 'Four Functions' which does not maintain Conservation in relation to Quantity. We will revisit the 'Multiplication Function' again in a moment, after we examine the 'Division Function', which is explained below.

In examining the Function of "2/2" (again using four marbles), we will start out with one set of two marbles oriented vertically at the top, and another set of two marbles oriented horizontally and set beneath the first pair of marbles. This means that in Dividing one of these sets of two marbles by the other, we will (using one set of two marbles) separate one set of two marbles into two instances of one marble each. This will leave us with two instances of one marble, along with the Divisive set of two marbles, which will maintain Conservation of Quantity, in that "1+1+2=4". (While Quality is also Conserved, in that all of the marbles maintain their 'Quality Of 1' through this Function.) This particular 'Division Function' will only maintain Conservation of both Quality and Quantity if it involves one set of two marbles separating another set of two marbles, which might look something like what is shown below. (In this case, the vertical and horizontal "--->'s" indicate the 'Divisive Interaction', while in this scenario, the Divisive set of two marbles persists on after Dividing the other set of two marbles, as is indicated below the Divided marbles.)



Above, we see one possible representation of the Function of "2/2", which (assuming that the Divisive marbles persist) maintains Conservation of Quantity, Quality, and 'Conserved Quality'.

At this point, we need to clarify the new and important piece of terminology which was used a moment ago. The term *Interaction* is interchangeable with the term *Function*, and this is due to the fact that Numbers Interact with one another through the 'Four Functions'. When we are describing a situation Mathematically, we will be working with Functions and Numbers, where as when we are describing a situation Physically, we will be working with Interactions and Quanta (though the differences in terminology will be purely semantic).

In the example which is seen above, we are assuming that the Function of "2/2" involves two sets of marbles, each of which contains two individual marbles. This is the same assumption under which we have been operating throughout these examples, with this assumption involving the fact that we are working with sets of marbles, each of which is comprised of a series of individual marbles, each of which possesses an inherent 'Quality Of 1'. However, this assumption is not entirely accurate, at least not for our current purposes. In order to gain a more appropriate Quantum Mathematical understanding of these Functions (or Interactions), we will need to visualize these sets of marbles as singular marbles (or Quanta). This can be achieved by switching the Quantity of a set of marbles into the Quality of one

marble, as is explained below. (At this point, it is worth noting the similarity between the terms *Quantity*, *Quality*, and *Quanta*, all of which involve the root word *Qua*.)

In the first of the examples which was seen in this chapter, we Added one set of two marbles to another set of two marbles, in order to yield one Greater set of four marbles, with all of these sets consisting of individual marbles, each of which possessed an inherent 'Quality Of 1'. However, we could also perform this (or any) 'Addition Function' using instances of single marbles which possess Greater Qualities. In that case, the Function of "2+2" would involve one single marble with a 'Quality Of 2' being Added to another single marble with a 'Quality Of 2', in order to yield one single marble with a 'Quality Of 4'. This Interaction is shown below, with the individual marbles represented as Quanta, or Numbers inside of circles (with these Quanta having been seen previously in "Quantum Mathematics and the Standard Model of Physics Part One: The Birth of Siblings").

$$\textcircled{2} \text{---} > \textcircled{4} < \text{---} \textcircled{2}$$

Above, we see two separate marbles, each of which possesses a 'Quality Of 2', coming together to yield a single marble which possesses a 'Quality Of 4'. This particular '+2 Addition Interaction' maintains Conservation in terms of Quality (in that "2+2=4"), though Conservation is lost in terms of Quantity (as two individual marbles have combined into one lone marble, and "1+1≠1"). Furthermore, we can determine that the inverse of all of this would describe the loss of Conservation which would be seen in relation to the singular marble version of the 'Subtraction Function' which was examined earlier in this chapter, in that the Interaction of "4-2=2" would involve one marble which possesses a 'Quality Of 4' yielding two individual marbles, each of which possesses a 'Quality Of 2', and "1≠1+1".

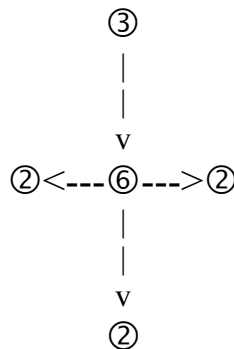
The seeming loss of 'Quantity Conservation' which is described above is actually just a natural Quantum phenomenon, one which can be understood in terms of drops of water, which can come together to form a larger drop and split apart again into arbitrarily small drops. If we were to place a single drop of water on a surface, then we would have a 'Quantity Of One' (tiny) puddle, which would possess a 'Quality Of 1', in that it would contain one individual drop of water. Then, if we were to Add another drop of water to the first drop, this would yield a 'Quantity Of One' slightly larger puddle, which would possess a 'Quality Of 2', as the puddle would contain two individual drops of water. Furthermore, no matter how many more drops of water we were to Add to this puddle, the overall puddle would always possess a 'Quantity Of One'. (The inverse of all of this applies in relation to the 'Subtraction Function'.) We have already seen a variation on this behavior in relation to the multiple-marble examples, in that the combination of one set of marbles with another set of marbles will always yield one Greater set of marbles, and "1+1≠1".

Next, with our new Quantum Mathematical understanding of these marbles (which we will now be referring to as *Quanta*), we will indicate the Function of "2/2" using two individual Quanta, each of which possesses a 'Quality Of 2', as is shown below.

$$\begin{array}{c} \textcircled{2} \\ | \\ | \\ v \\ \textcircled{1} < \text{---} \textcircled{2} \text{---} > \textcircled{1} \end{array}$$

Above, we again see the Function of "2/2", though in this case, the divisor and the dividend are represented as Quanta, each of which possesses a 'Quality Of 2'. In this scenario, the Divided Quanta (which possesses a 'Quality Of 2') is Divided into two separate Lesser Quanta, each of which possesses a 'Quality Of 1'. While in this scenario, the Divisive Quanta (this being the topmost "②") is "Absorbed" by the Divided Quanta, and its Quality is represented as the new Quantity of the Lesser Quanta (both of which in this case possess a 'Quality Of 1').

This means that indicating this 'Divisive Interaction' with singular Quanta causes the Divided Quantity to separate like drops of water, while the Quality of the Divisive Quanta is Absorbed, and displayed as the Quantity of the Divided Quanta. Furthermore, we can determine that no matter what this new Quantity may be, each of the individual Quanta will possess the same (new) Quality. This is shown below in relation to the Interaction of "⑥/③", which yields a Quantity of three equal Quanta, each of which possesses a 'Quality Of 2'.



Above, we can see that each of the Divided Quanta possesses a 'Quality Of 2'. This Matching quotient characteristic arises due to the fact that all 'Divisive Interactions' will yield Matching quotients, as this characteristic is inherent to the 'Divisive Interaction' itself, in that there is no 'Divisive Interaction' in existence which will yield non-Matching quotients. Also, since this Interaction involves Matching quotients, 'Conserved Quality Conservation' is displayed, in that "6X1=6" and "2X3=6". Though individually, neither Quality or Quantity are Conserved through this Interaction, in that "3+6≠6", and "1+1≠3".

It should be noted at this point that the equal quotient characteristic which is seen above is indicative of the fact that the 'Division Function' can be considered to be a series of equal and simultaneous 'Subtraction Functions', with this being considered to be an "Exponential" form of Subtraction. In the example which is seen above, the Function of "6/3" could also be considered to be three separate though simultaneous '-2 Subtraction Functions', all of which are being Subtracted from an initial minuend of 6, as the overall Subtraction Function' of "6-2-2-2". (The same can also be said of the 'Multiplication Function' in relation to the 'Addition Function', as will be explained in a moment.)

With our new Quantum Mathematical understanding of these Quanta, we can now reexamine the Function of "4X2" which was seen earlier in this section, this time using singular Quanta which possess Qualities of 4 and 2, as is shown below.



Above, we can see that in this scenario, when the leftmost Quanta (which possesses a 'Quality Of 4') is Multiplied by the rightmost Quanta (which possesses a 'Quality Of 2'), they combine to become one

Greater Quanta, which possesses a 'Quality Of 8'. This means that this 'Multiplicative Interaction' seemingly does not maintain Conservation of Quality or Quantity, as " $4+2\neq 8$ " and " $1+1\neq 1$ ", respectively. Though in terms of Quantity, we can see that this Interaction involves a merging behavior which is similar to that which was explained a moment ago (using the water analogy), in that two separate 'Quantities Of One' have come together to yield a single 'Quantity Of One'. While in this scenario, the Multiplicative Quality is Absorbed, as was the case with the Divisive Quality in relation to the 'Divisive Interaction' which was examined a moment ago. However in this case, the Absorbed Quality is displayed by the Multiplied Quality as a form of Quantity, in that a 'Quantity Of Two' of a 'Quality Of 4' is equivalent to a 'Quantity Of One' of a 'Quality Of 8', with this being the product which is yielded by the Interaction of " $4 \times 2$ ".

Also, as is the case with the 'Division Function' in relation to the 'Subtraction Function', the 'Multiplication Function' can be considered to be a series of equal and simultaneous 'Addition Functions', with this being considered to be an Exponential form of Addition. For example, the Function of " $4 \times 4$ " could also be considered to be three separate and simultaneous '+4 Addition Functions', all of which are being Added to an initial addend of 4, as the overall 'Addition Function' of " $4+4+4+4$ ". (The overall concept of 'Exponential Functions' is only of minor importance in relation to the current subject matter, and therefore will not be covered any further in this book.)

The point of all of this is that throughout the remaining Standard Model of Physics themed chapters, we will be working exclusively with the Quantum Mathematical (singular Quanta) scenario. This is due to the fact that we will only be working with two overall types of Functions, one of which involves the merging together of two or more Numbers (with these Functions being the '(+/X) Cousin Functions'), and one of which involves the splitting apart of one Number into two or more Numbers (with these Functions being the '(- /) Cousin Functions').

While the specifics of the four 'Complete Functions', in terms of 'Family Group Charge' and 'Family Group Reactivity', will be the subject of the remainder of this chapter. (The overall concept of 'Complete Functions' will be explained in the next section of this chapter.) Also, it should be mentioned at this point that for the remainder of this chapter, the Numbers will be represented digitally, and not as Quanta.

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In "Quantum Mathematics and the Standard Model of Physics Part Four: An Examination of the Four Functions", we worked with specific 'Collective Functions', such as the 'Collective +1 Addition Function', the 'Collective -2 Subtraction Function', the 'Collective X3 Multiplication Function', etc. . While in this chapter (as well as a few others), we will be working with the four 'Complete Functions' (these being the 'Complete Addition Function', the 'Complete Subtraction Function', the 'Complete Multiplication Function', and the 'Complete Division Function'), each of which is comprised of all nine of its individual respective 'Collective Functions'. This means that the 'Complete Addition Function' involves the 'Collective +1 Addition Function', the 'Collective +2 Addition Function', the 'Collective +3 Addition Function', etc., up to and including the 'Collective +9 Addition Function' (as is also the case in relation to the other three 'Complete Functions'). The remainder of this chapter will involve an examination of the behaviors which are displayed by the 'Base Numbers' in relation to the four 'Complete Functions'.

With that said, we will start with the 'Complete Addition Function'. First, we will list the nine 'Collective Addition Functions', and the changes which each of the individual 'Collective Addition Functions' causes in the Numbers with which it Interacts (in relation to 'Family Group Charge' and 'Family Group Reactivity'), all of which is shown below. (This list involves the same color code as was seen in the previous Standard Model of Physics themed chapter, as is explained below the list.)

'Collective +1 Addition Function': **up** one Family Group, Reactive 1+/-,4+/-,7+/- 2+/-,5+/-,8+/- 3+, 6+, 9+  
 'Collective +2 Addition Function': **down** one Family Group, Reactive 1+/-,4+/-,7+/- 2+, 5+, 8+ 3+, 6+, 9+  
 'Collective +3 Addition Function': **same** Family Group, Reactive (+\*)  
 'Collective +4 Addition Function': **up** one Family Group, Reactive 1+, 4+, 7+ 2+, 5+, 8+ 3-, 6-, 9-  
 'Collective +5 Addition Function': **down** one Family Group, Reactive 1+, 4+, 7+ 2-, 5-, 8- 3-, 6-, 9-  
 'Collective +6 Addition Function': **same** Family Group, Reactive (-\*)  
 'Collective +7 Addition Function': **up** one Family Group, Reactive 1-, 4-, 7- 2-, 5-, 8- 3+/-,6+/-,9+/-  
 'Collective +8 Addition Function': **down** one Family Group, Reactive 1-, 4-, 7- 2+/-,5+/-,8+/- 3+/-,6+/-,9+/-  
 'Collective +9 Addition Function': **same** Family Group, Reactive (+/-\*)

Above, we see a list of the 'Family Group Charges' and 'Family Group Reactivities' which are possessed by all of the individual 'Collective Addition Functions', all of which were determined in "Quantum Mathematics and the Standard Model of Physics Part Four: An Examination of the Four Functions". To start, we are going to examine (and rename) the overall concept of 'Family Group Charge', as is explained below. (The "\*"s" which are seen above will be explained a bit later in this section.)

In looking at the list of 'Collective Addition Functions' which is shown above (which together comprise the 'Complete Addition Function'), we can see that the Addition of any member of the '1,4,7 Family Group' causes a **raise** in the Family Group membership of the Number which it has been Added to, and inversely, the Addition of any member of the '2,5,8 Family Group' causes a **drop** in the Family Group membership of the Number which it has been Added to. While we can also see above that the Addition of any member of the '3,6,9 Family Group' causes **no change** in the Family Group membership of the Number which it has been Added to. This all falls under the characteristic of 'Family Group Charge', which means that the 'Complete Addition Function' possesses a 'Family Group Charge(+)(-)(+/-)'.  
 The descriptor of 'Family Group Charge(+)(-)(+/-)' indicates the 'Family Group Charge' which is possessed by the 'Complete Addition Function'. In "Quantum Mathematics and the Standard Model of Physics Part Four: An Examination of the Four Functions", we examined the 'Family Group Charges' which are possessed by the individual 'Collective Functions', which means that we examined the manner in which each of the individual 'Collective Functions' effects the Family Group membership of the Numbers which are involved in the individual Functions based on their initial Family Group membership, with the descriptors involving three separate Charges (or three separate groups of three Charges) which reference Family Groups which are Like, Similar, and Polar to the Function Number (respectively). Though in this situation, we are examining the 'Family Group Charge' of the entire set of 'Collective Addition Functions' (as the 'Complete Addition Function'), which means that the descriptors of Similar, Like, and Polar would not apply here. Instead, in relation to 'Complete Functions', the descriptor of the 'Family Group Charge' will involve three sets of parentheses which will always represent the 1,4,7, 2,5,8, and 3,6,9 Family Groups (in that order). While in this case, the 'Family Group Charge' which is possessed by the 'Complete Addition Function' only requires one Charge to be displayed within each of its sets of parentheses, which is due to the fact that the 'Complete Addition Function' causes the members of each of the Family Groups to react in the same manner to all of the

other Family Group members (in terms of 'Family Group Charge'). (The other three 'Complete Functions' may or may not cause a similar form of Matching, and therefore may or may not require three separate Charges to be displayed within each of their sets of parentheses, which will be seen as we progress.)

The 'Family Group Charge' which is possessed by the 'Complete Addition Function' is the first of the overall forms of Charge which we will examine in this chapter. First, we will examine a chart of all of the individual 'Addition Functions' which are possible between the 'Base Numbers', with this chart involving a Family Group color code which indicates the changes in the 'Family Group Charge' of the Numbers which are involved in each of the individual 'Addition Functions'. This chart will be seen in a moment, after we establish a few of the basic behaviors which are displayed by the Numbers which are contained within the chart, all of which are explained below.

The behaviors which are displayed by the Numbers which are contained within the chart are as follows. The Adding together of any two Numbers which are co-members of either the 1,4,7 or 2,5,8 Family Group always yields a sum which condenses to a member of the opposing Family Group (for example, " $1+4=5$ " and " $2+5=7$ "). While the Adding together of any two Numbers which are co-members of the '3,6,9 Family Group' always yields a sum which condenses to a value which maintains the '3,6,9 Family Group' (for example, " $3+6=9$ "). Also, the Adding together of any two Numbers which are members of the opposing 1,4,7 and 2,5,8 Family Groups always yields a sum which condenses to a value which maintains the '3,6,9 Family Group' (for example, " $1+2=3$ "). Furthermore, the Addition of a member of the '3,6,9 Family Group' to a member of one of the opposing two Family Groups always yields a sum which condenses to a value which maintains the Family Group of the non-'3,6,9 Family Group' addend (for example, " $1+3=4$ " and " $2+3=5$ ").

Next, having established those three overall forms of behavior, we will examine a chart which contains all of the individual 'Addition Functions' which are possible between the 'Base Numbers', which is shown below, with the chart broken up into three vertical columns, each of which contains three individual columns of Functions. The rightmost column of Functions involves the members of the '3,6,9 Family Group' being Added (individually) to all of the 'Base Numbers', the center column of Functions involves the members of the '2,5,8 Family Group' being Added (individually) to all of the 'Base Numbers', and the leftmost column of Functions involves the members of the '1,4,7 Family Group' being Added (individually) to all of the 'Base Numbers'. While the empty space which is seen at the bottom of the center column is due to the redundant Functions which involve the Addition of the various members of the '2,5,8 Family Group' to the various members of the '3,6,9 Family Group', which are already shown in the rightmost column (though with orientationally Mirrored addends), and the larger empty space which is seen at the bottom of the leftmost column is due to the two sets of redundant Functions which involve the Addition of the various members of the '1,4,7 Family Group' to the various members of the 2,5,8 and 3,6,9 Family Groups, all of which are already shown in the center and rightmost columns, respectively (though with orientationally Mirrored addends). (It is the quality of Non-Locality which is possessed by the 'Addition Function' which negates the need for us to show these individual Functions twice.) Also, it should be noted that all of the multiple-digit sums which are yielded by the individual Functions are shown condensed down to their single-digit representations, as will be the case in relation to all of the multiple-digit solutions which will be seen in this chapter.



$1+1=2$	$4+1=5$	$7+1=8$	$1+2=3$	$4+2=6$	$7+2=9$	$1+3=4$	$4+3=7$	$7+3=1$
$1+4=5$	$4+4=8$	$7+4=2$	$1+5=6$	$4+5=9$	$7+5=3$	$1+6=7$	$4+6=1$	$7+6=4$
$1+7=8$	$4+7=2$	$7+7=5$	$1+8=9$	$4+8=3$	$7+8=6$	$1+9=1$	$4+9=4$	$7+9=7$
			$2+2=4$	$5+2=7$	$8+2=1$	$2+3=5$	$5+3=8$	$8+3=2$
			$2+5=7$	$5+5=1$	$8+5=4$	$2+6=8$	$5+6=2$	$8+6=5$
			$2+8=1$	$5+8=4$	$8+8=7$	$2+9=2$	$5+9=5$	$8+9=8$
						$3+3=6$	$6+3=9$	$9+3=3$
						$3+6=9$	$6+6=3$	$9+6=6$
						$3+9=3$	$6+9=6$	$9+9=9$

Above, we see a chart which contains all of the individual 'Addition Functions' which are possible between the 'Base Numbers'. In relation to all of the individual 'Addition Functions', the original Number (this being the pre-Function Number) is oriented on the far-left side of the Function, the addend is oriented to the center the Function, and the sum (this being the post-Function Number) is oriented on the far-right side of the Function. (To clarify, in relation to these 'Addition Functions', the addend is considered to be the secondary Number which is being Added to the original Number in order to yield the sum Number.) While the changes in the colors of the original Numbers (to those of the sum Numbers) indicate the 'Family Group Charge' of all of these individual Functions (as was mentioned a moment ago), in that the 'Family Group Charge' of a Function causes a change in the 'Family Group Charge' of a Number. What this means is that it is actually the Numbers themselves which possess 'Family Group Charge', not the Functions. This is a very important clarification, and is due to the fact that a Function is not a tangible thing, and as such, is incapable of possessing any form of Charge. A Function is merely the specific form of Interaction which occurs between two tangible, though at this point poorly defined things, these being Numbers, or Quanta. The Functions simply possess a quality or characteristic which is reactive to (or with) the 'Family Group Charge' which is possessed by the Numbers. However, throughout the remaining Standard Model of Physics themed chapters, we will continue to refer to the Functions as though they possess 'Family Group Charge', just for the sake of simplicity. Though this will always be done with an understanding that 'Family Group Charge' is possessed only by the Numbers, and not the Functions. (This is also the case in relation to all of the other forms of Charge, which will be seen as we progress.)

At this point, we are already familiar with the concept of 'Family Group Charge' in relation to the 'Four Functions', which was explained in "Quantum Mathematics and the Standard Model of Physics Part Four: An Examination of the Four Functions". Though now we can see that it is actually the Numbers themselves which possess 'Family Group Charge', which they gain automatically by virtue of their membership in their particular Family Group. Furthermore, since each of the 'Base Numbers' is a member of one of the three Family Groups, this means that each of the 'Base Numbers' must always possess a 'Family Group Charge' of some kind. The inherent 'Family Group Charge' which is possessed by each of the 'Base Numbers' is the characteristic which is being indicated by the three opposing colors which are seen in the chart which is shown above.

With all of that taken into account, we will now rename the overall concept of 'Family Group Charge'. In continuing with the overall green, red, and blue Trinity color code which we have been using since "Chapter Zero", we will consider all of the members of the '1,4,7 Family Group' to possess a static "Green Charge", with this 'Green Charge' in this case acting as an "Up Charge". This 'Up Charge' is a variation on a 'Positive Charge', and is strictly in relation to the unique "Color Charge" which is

possessed by all of the 'Base Numbers', and not in relation to 'Family Group Reactivity', as will be explained in a moment. (Also, it should be noted that this 'Up Charge' is strictly in relation to the overall 'Addition Function'.) While the 'Color Charges' which are possessed by the members of the other two Family Groups involve a static "Red Charge" in relation to the members of the '2,5,8 Family Group', which in this case is acting as a "Down Charge", and a static "Blue Charge" in relation to the members of the '3,6,9 Family Group', which in this case is acting as a "Middle Charge". Also, as was just mentioned, all of these specific Charges (these being 'Up Charge', 'Down Charge', and 'Middle Charge') are strictly in relation to the 'Addition Function'. This means that alternate Functions may possess alternate characteristics which will react differently to each of the static 'Color Charges' (these being 'Green Charge', 'Red Charge', and 'Blue Charge'), which will be seen in the next section of this chapter, when we examine the 'Complete Subtraction Function'. (Also, it should be mentioned at this point that throughout these Standard Model of Physics themed chapters, the terms 'Green Charge', 'Red Charge', and 'Blue Charge' will all be highlighted in a 'Color Charge' color code, as they have been throughout this paragraph.)

What all of this means is that we have determined that each of the nine 'Base Numbers' possesses an inherent 'Family Group Charge', which we have now renamed 'Color Charge'. While we have also determined that the 'Base Numbers' possess this 'Color Charge' according to their Family Group membership. This means that each of the 'Base Numbers' inherently possesses one of the three static 'Color Charges' (these being 'Green Charge', 'Red Charge', or 'Blue Charge'), each of which can behave as either an 'Up Charge' ("+"), a 'Down Charge' ("-"), or a 'Middle Charge' ("+/-"), depending on the specific circumstances (these being the Number which they are Interacting with, and which of the 'Four Functions' is involved in the Interaction). (These concepts will all be explained more thoroughly as we work our way through this chapter.)

One of the behaviors which has been seen in this section involves the fact that when the 'Base Numbers' are involved in the 'Addition Function', these Interactions can effect the "Net Color Charge" of the solution Number in a variety of manners. Next, we will examine a chart of all of the possible 'Additive Color Interactions', which is shown below. (To clarify, these cases which involve the Adding together of two Numbers into one single Number will involve two (possibly) unique 'Color Charges' merging to form a (usually) different 'Color Charge', which is what is meant by the term 'Net Color Charge'.)

Green + Green = Red	Green + Red = Blue	Green + Blue = Green
Red + Red = Green	Red + Green = Blue	Red + Blue = Red
Blue + Blue = Blue	Blue + Green = Green	Blue + Red = Red

Above, we can see in the leftmost vertical column of 'Color Interactions' that the 'Addition Function' causes Matching 'Color Charges' to cancel one another out and flip to their Polar, in that two 'Green Charges' Add to a 'Red Charge', two 'Red Charges' Add to a 'Green Charge', and two 'Blue Charges' Add to a 'Blue Charge'. (To clarify, 'Blue Charges' are Polars which display 'Perfect Matching' between one another in the same manner in which Neutrals and the '3,6,9 Family Group' are each Polars which display 'Perfect Matching' between one another, with all of these examples involving variations on the overall concept of 'Neutral Matching', as has been explained in previous chapters.) Also, we can see above that the 'Addition Function' causes instances of opposing 'Color Charges' to come together and flip to (or remain) a 'Blue Charge', in that "Green + Red = Blue", "Red + Green = Blue", and "Blue + Blue = Blue". While we can also see above that all of the individual Functions which involve

the Addition of 'Blue Charge' are a unique form of 'No Change Function', in that any 'Color Charge' which 'Blue Charge' is Added to maintains its original 'Color Charge', with this behavior also being displayed in relation to 'Blue Charge', in that " $\text{Green} + \text{Blue} = \text{Green}$ ", " $\text{Red} + \text{Blue} = \text{Red}$ ", and " $\text{Blue} + \text{Blue} = \text{Blue}$ ". Furthermore, we can see above that a form of Neutralization is present in relation to the Functions which involve the Polars of 'Green Charge' and 'Red Charge', in that " $\text{Green} + \text{Red} = \text{Blue}$ " and " $\text{Red} + \text{Green} = \text{Blue}$ ". (This form of Neutralization will be explained a bit later in this chapter, along with the 'Complete Subtraction Function'.)

It should be briefly noted (again) at this point that each of the 'Base Numbers' possesses a static 'Color Charge' which can never change. The changes in 'Color Charge' which are seen above arise due to the Addition of two independent Numbers into one individual Number, which (usually) yields a new Number which possesses a new 'Color Charge'. This means that 'Color Charge' only changes when the Number itself changes, which means that we will never encounter a 'Blue Charged 1', a 'Green Charged 2', a 'Red Charged 3', etc. .

While it should also be noted that the Quantities of each of the individual 'Color Charges' which are possessed by the sums which are contained within the chart which is seen above (these being the Colors which are oriented to the right of the "="s) display Matching between one another, in that there are three examples of each of the three 'Color Charges' (with one instance of each of the 'Color Charges' being present within each of the horizontal rows). This particular form of 'Color Charge Parity' will be maintained by two of the four 'Complete Functions', which will be seen as we progress.

All of this means that we have redefined the overall concept of 'Family Group Charge' (and renamed it '*Color Charge*'), and determined that the 'Complete Addition Function' possesses a 'Color Charge(+)(-)(+/-)'. As was mentioned earlier, the descriptors of these complete 'Color Charges' will all involve three sets of parentheses (each of which represents one of the three Family Groups), and since in this case the three members of each of the three Family Groups all display behavioral Matching between one another (individually), each set of parentheses only contains one individual Charge. Though the 'Color Charges' of the '(X / /) Sibling Complete Functions' involve sets of parentheses which will for the most part contain three unique Charges, as will be seen a bit later in this chapter.

Next, before we move on to the 'Complete Subtraction Function', we need to reassess our understanding of the overall concept of 'Family Group Reactivity'. First, since we have already retired the term '*Family Group Charge*', and replaced it with the term '*Color Charge*', we might as well go ahead and retire the term '*Family Group Reactivity*', and replace it with the term "*Reactive Charge*". This 'Reactive Charge' is still the catalyst for any change of orientation within the Family Group, though it is independent of any change in Family Group, which means that 'Reactive Charge' is independent from, yet fully compatible with 'Color Charge', as was explained in "Quantum Mathematics and the Standard Model of Physics Part Four: An Examination of the Four Functions". Also, we need to clarify that as is the case in relation to 'Color Charge', 'Reactive Charge' is not actually possessed by the 'Addition Function' (or any Function), it is instead possessed by the 'Base Numbers' themselves. The Functions have qualities or characteristics which React in a variety of manners with the 'Reactive Charge' which is possessed by each of the 'Base Numbers', with these Reactions causing varying movements within the Family Group. However, the Functions themselves do not actually possess this 'Reactive Charge', it is possessed only by the 'Base Numbers'. (Though again, we will continue to refer to the Functions as though they possess 'Reactive Charge', just for the sake of simplicity.)

This 'Reactive Charge' is inherent, in that it is possessed by all of the 'Base Numbers' due to their orientation within their Family Group. (This means that as is the case in relation to 'Color Charge', since each of the 'Base Numbers' is a member of one of the three Family Groups, a 'Base Number' must always possess a 'Reactive Charge' of some kind.) The 1, the 2, and the 3 are each the first (or leftmost) member of their respective Family Group, which means that these three Numbers each possess a static, inherent "First Charge". While the 4, the 5, and the 6 are each the second (or center) member of their respective Family Group, which means that they each possess a static, inherent "Second Charge", and the 7, the 8, and the 9 are each the third (or rightmost) member of their respective Family Group, which means that they each possess a static, inherent "Third Charge".

Furthermore, as is the case in relation to the three static 'Color Charges' (these being 'Green Charge', 'Red Charge, and 'Blue Charge'), the three static 'Reactive Charges' (these being 'First Charge', 'Second Charge', and 'Third Charge') can each independently act as a variation on a 'Positive Charge', a 'Negative Charge', or a 'Neutral Charge', depending on the circumstances. In relation to 'Color Charge', the three variations are referred to as 'Up Charge', 'Down Charge', and 'Middle Charge', which is due to the fact that these Charges cause either a raise, a drop, or no change in the Family Group membership of the Number which they are Interacting with. Though in relation to 'Reactive Charge', the three variations cause a movement of the Number within its Family Group. Specifically, these variations cause a movement of one step to the right (which is referred to as a "Right Charge"), a movement of one step to the left (which is referred to as a "Left Charge"), or no movement in either direction (which is referred to as a "Center Charge"). (It should be mentioned at this point that as is the case in relation to 'Color Charge', these three specific forms of Charge are strictly in relation to the overall 'Addition Function', and alternate Functions may possess alternate characteristics which will React differently in relation to each of the three static 'Reactive Charges'.)

Taking all of that into account, we can determine that the 'Complete Addition Function' possesses the complete 'Reactive Charge' which is shown below. (It should be mentioned at this point that these complete 'Reactive Charges' are quite long and complex, therefore we are going to display the Number inside of each of the individual sets of parentheses in order to assist us with our identification of specific Charges. Also, it should be mentioned that in this case, the three members of each of the three Family Groups all React in the same manner (in relation to the same 'Base Number'), therefore each of the 'Base Numbers' only contains one group of three Charges within its set of parentheses, except in relation to the "Pure Reactive Charges" which are possessed by the '3,6,9 Family Group' members, as will be explained in a moment.)

'Reactive Charge(1 +/-,+/-,+)(2 +/-,+,+)(3 +)(4 +,+,-)(5 +,-,-)(6 -)(7 -,-,+/-)(8 -,+/-,+/-)(9 +/-)'

Above, we see the 'Reactive Charge' which is possessed by the 'Complete Addition Function'. This complete 'Reactive Charge' contains a series of individual Charges which collectively display a simple pattern which runs from left to right. Starting on the first "+", and representing the Charges alphabetically, this pattern is A,C,A,A,A,A,A,B,A,B,B,B,B,C,B,C,C,C,C,C. (This pattern arises as a result of the Mirroring which is displayed between the individual 'Collective Addition Functions', which has been covered in previous chapters, and is not immediately relevant.)

Though the far more important characteristic which is displayed by the 'Reactive Charge' which is possessed by the 'Complete Addition Function' involves the fact that the '3,6,9 Family Group' members are the only Numbers which possess a 'Pure Reactive Charge', in that their Reactive effect is independent of the Family Group membership of the other Number which is involved in the Function

(it is for this reason that each of their sets of parentheses only contain one Charge, while all of the other sets of parentheses contain three separate Charges). Also, we can see above that these three 'Pure Reactive Charges' display a form of 'Perfect Mirroring' between one another, in that the 3 possesses a 'First Charge', which in this case is behaving as a 'Right Charge' ("+"), the 6 possesses a 'Second Charge', which in this case is behaving as a 'Left Charge' ("-"), and the 9 possesses a 'Third Charge', which in this case is behaving as a 'Center Charge' ("+-"). The 'Pure Reactive Charges' which are possessed by the members of the '3,6,9 Family Group' are indicative of a very important characteristic which will be explained in upcoming Standard Model of Physics themed chapters. (It should be mentioned at this point that these instances of 'Pure Reactive Charge' were noted on the list of the nine 'Collective Addition Functions' which was seen at the start of this section with "\*"s".)

While in looking again at the aforementioned pattern which is displayed by the Charges which are contained within this particular 'Reactive Charge' (collectively), we can see that this pattern arises due to the fact that the 'Pure Reactive Charges' which are possessed by the '3,6,9 Family Group' members have an effect on the 'Reactive Charges' which are possessed by their Neighboring Numbers. Starting from the left side of the complete 'Reactive Charge', we can see that the two individual Charges which are oriented to either side of the 3 display Matching in relation to the center Charge, as do those which are oriented to either side of the 6, as well as those which are oriented to either side of the 9. While we can also see that in each case, the Charges which are oriented one concentric step out past the two Matching Charges display Matching in relation to the next closest 'Pure Reactive Charge'. (This behavior arises due to the fact that the individual Charges which comprise this overall 'Reactive Charge' collectively display a variation on the overall concept of a 'Ripple Pattern', which has been touched on in previous chapters, and will eventually be examined in "Chapter 6.6: Tossing Stones".)

This Ripple characteristic can also be seen in a chart of the 'Reactive Charges' which are possessed by the various 'Collective Addition Functions' (as a form of Mirroring), as is shown below (with the topmost horizontal row of Charges representing the previously ignored 'Collective +0 Addition Function', which is included in the chart in order to help frame the overall form of Mirroring)

```

+/- +/- +/-  +/- +/- +/-  +/- +/- +/-
+/- +/- +/-  +/- +/- +/-  +  +  +
+/- +/- +/-  +  +  +      +  +  +
+  +  +      +  +  +      +  +  +
+  +  +      +  +  +      -  -  -
+  +  +      -  -  -      -  -  -
-  -  -      -  -  -      -  -  -
-  -  -      -  -  -      +/- +/- +/-
-  -  -      +/- +/- +/-  +/- +/- +/-
+/- +/- +/-  +/- +/- +/-  +/- +/- +/-

```

Above, we can see that this overall form of Mirroring arises due to the 'Pure Reactive Charges' which are possessed by the members of the '3,6,9 Family Group', which are indicated by the four horizontal rows which involve nine instances of the same Charge (these being the first, fourth, seventh, and tenth rows).

To recap, at this point we have determined that each of the 'Base Numbers' possesses an inherent 'Color Charge', which it gains via its Family Group membership. This means that each of the 'Base Numbers' possesses one of the three static 'Color Charges' (these being 'Green Charge', 'Red Charge', or 'Blue Charge'), each of which can act as either an 'Up Charge', a 'Down Charge', or a 'Middle Charge', depending on which Number and Function are involved in the Interaction. While we have also determined that each of the 'Base Numbers' possesses an inherent 'Reactive Charge', which it gains via its orientation within its Family Group. This means in addition to its static 'Color Charge', each of the 'Base Numbers' also possesses one of the three static 'Reactive Charges' (these being 'First Charge', 'Second Charge', or 'Third Charge'), each of which can act as either a 'Right Charge', a 'Left Charge', or a 'Center Charge', depending on which Number and Function are involved in the Interaction. Furthermore, we have determined that the overall concepts of 'Color Charge' and 'Reactive Charge' are independent from, though fully compatible with one another.

That brings our examination of the 'Complete Addition Function', and therefore this section, to a close.

\*\*\*\*\*

Next, we will examine the 'Complete Subtraction Function'. We will begin with a list of the Color and Reactive Charges which are possessed by the nine individual 'Collective Subtraction Functions', which is shown below. (It should be mentioned at this point that in the list which is shown below, the descriptors of the 'Color Charges' will be shown as Charges within parentheses, as opposed to the words "up", "down", and "same", as will also be the case in relation to all of the rest of the lists which will be seen in this chapter. Also, while the list of the nine 'Collective Addition Functions' which was seen in the previous section involves descriptors in which the individual 'Reactive Charges' are shown with each individual Number displayed for each individual Function (which was just for clarity), the rest of these lists will involve the shorter 'Reactive Charge' descriptors which are seen below, in which each set of parentheses represents one of the three Family Groups. While in this case, each of the individual sets of 'Reactive Charge' parentheses only contain one Charge, as all three members of each of the Family Groups React in the same manner, as is also the case in relation to the 'Complete Addition Function'.)

'Collective -1 Subtraction Function': 'Color Charge(-)', 'Reactive Charge(-)(+/-)(+/-)'  
 'Collective -2 Subtraction Function': 'Color Charge(+)', 'Reactive Charge(-)(-)(+/-)'  
 'Collective -3 Subtraction Function': 'Color Charge(+/-)', 'Reactive Charge(-\*)'  
 'Collective -4 Subtraction Function': 'Color Charge(-)', 'Reactive Charge(+)(-)(-)'  
 'Collective -5 Subtraction Function': 'Color Charge(+)', 'Reactive Charge(+)(+)(-)'  
 'Collective -6 Subtraction Function': 'Color Charge(+/-)', 'Reactive Charge(+\*)'  
 'Collective -7 Subtraction Function': 'Color Charge(-)', 'Reactive Charge(+/-)(+)(+)'  
 'Collective -8 Subtraction Function': 'Color Charge(+)', 'Reactive Charge(+/-)(+/-)(+)'  
 'Collective -9 Subtraction Function': 'Color Charge(+/-)', 'Reactive Charge(+/-\*)'

Above, we can see that in relation to the 'Color Charges' which are possessed by the individual 'Collective Subtraction Functions', the Subtraction of any member of the '1,4,7 Family Group' causes a **drop** in the Family Group membership of the Number which it is being Subtracted from, and inversely, the Subtraction of any member of the '2,5,8 Family Group' causes a **raise** in the Family Group membership of the Number which it is being Subtracted from. While we can also see above that the

Subtraction of any member of the '3,6,9 Family Group' causes **no change** in the Family Group membership of the Number which it is being Subtracted from, which means that the 'Complete Subtraction Function' possesses a 'Color Charge(-)(+)(+/-)'.

As was explained in the second section of this chapter, each of the 'Base Numbers' possesses one of the three static 'Color Charges' (these being 'Green Charge', 'Red Charge', and 'Blue Charge'), each of which can behave as either an 'Up Charge', a 'Down Charge', or a 'Middle Charge', depending on the situation. In relation to the 'Complete Addition Function', the 'Green Charged Numbers' (these being the '1,4,7 Family Group' members) all behave as 'Up Charged Numbers' (as was explained earlier), though in this case, in relation to the 'Complete Subtraction Function', these same 'Green Charged Numbers' all behave as 'Down Charged Numbers'. This Mirroring of Charges maintains in relation to the other two 'Color Charges' as well, in that in this case, the 'Red Charged Numbers' (these being the '2,5,8 Family Group' members) all behave as 'Up Charged Numbers' (where as in relation to the 'Complete Addition Function', they behave as 'Down Charged Numbers'), and the 'Blue Charged Numbers' (these being the '3,6,9 Family Group' members) all behave as 'Middle Charged Numbers', as is also the case in relation to the 'Complete Addition Function'. (To clarify, the behavioral Matching which is displayed between the 'Middle Charged Numbers' of the '(+/-) Sibling Complete Functions' is considered to be Perfect due to the fact that it involves a variation on 'Neutral Matching'.) We will examine the 'Perfect Mirroring' which is displayed between the 'Color Charges' of the '(+/-) Sibling Complete Functions' towards the end of this section, after we more thoroughly examine the Color and Reactive Charges which are possessed by the 'Complete Subtraction Function'.

The behaviors which are described above confirm that the 'Color Charge' which is possessed by each of the individual Numbers is static, in that it never changes (unless the Number itself changes through a Function, in which case, the 'Color Charge' may change along with the Number). This again indicates that a Charge is simply an inherent quality or characteristic of a Number, which remains unchanging even while Interacting differently in different situations (with these situations involving Interactions with other Numbers via the 'Four Functions'). Also, it should be noted at this point that Interactions in which a 'Positive Base Charged Number' flips to a 'Negative Base Charged Number' (or vice versa) cause an "Antiversion" of the 'Color Charge' which is possessed by that Number, as will be explained in "Quantum Mathematics and the Standard Model of Physics Part Nine: Conserved Interactions and Anti-Charge".

Next, we will examine a chart which contains all of the individual 'Subtraction Functions' which are possible between the 'Base Numbers', which is shown below (with all of the Numbers highlighted in a 'Color Charge' color code). (This chart is complete, in that there are no excluded Functions, and this is due to the quality of Locality which is possessed by the 'Subtraction Function'. Previously, in relation to the 'Addition Function', we were able to disregard the redundant Functions, though this redundancy does not apply in relation to the 'Subtraction Function', as for example, the Function of "3-2" will not yield the same difference as the Function of "2-3".)

(Also, it should be noted at this point that the qualities of Locality and Non-Locality are not actually possessed by the Functions, in that as is the case in relation to the various forms of Charge, these qualities are possessed solely by the 'Base Numbers'. Though throughout the remaining chapters, we will continue to refer to the Functions as though they possess the qualities of Locality and Non-Locality, just for the sake of simplicity.)

$$\begin{array}{l}
1-1= 0(9) \quad 4-1= 3(3) \quad 7-1=6(6) \quad 1-2= -1(8) \quad 4-2= 2(2) \quad 7-2= 5(5) \quad 1-3= -2(7) \quad 4-3= 1(1) \quad 7-3= 4(4) \\
1-4=-6(3) \quad 4-4= 0(9) \quad 7-4=3(3) \quad 1-5= -4(5) \quad 4-5=-1(8) \quad 7-5= 2(2) \quad 1-6= -5(4) \quad 4-6= -2(7) \quad 7-6= 1(1) \\
1-7=-3(6) \quad 4-7=-6(3) \quad 7-7=0(9) \quad 1-8= -7(2) \quad 4-8=-4(5) \quad 7-8=-1(8) \quad 1-9= -8(1) \quad 4-9= -5(4) \quad 7-9=-2(7) \\
2-1= 1(1) \quad 5-1= 4(4) \quad 8-1=7(7) \quad 2-2= 0(9) \quad 5-2= 3(3) \quad 8-2= 6(6) \quad 2-3= -1(8) \quad 5-3= 2(2) \quad 8-3= 5(5) \\
2-4= -2(7) \quad 5-4= 1(1) \quad 8-4=4(4) \quad 2-5= -3(6) \quad 5-5= 0(9) \quad 8-5= 3(3) \quad 2-6= -4(5) \quad 5-6= -1(8) \quad 8-6= 2(2) \\
2-7= -5(4) \quad 5-7= -2(7) \quad 8-7=1(1) \quad 2-8= -6(3) \quad 5-8= -3(6) \quad 8-8= 0(9) \quad 2-9= -7(2) \quad 5-9= -4(5) \quad 8-9=-1(8) \\
3-1= 2(2) \quad 6-1= 5(5) \quad 9-1=8(8) \quad 3-2= 1(1) \quad 6-2= 4(4) \quad 9-2= 7(7) \quad 3-3= 0(9) \quad 6-3= 3(3) \quad 9-3= 6(6) \\
3-4= -1(8) \quad 6-4= 2(2) \quad 9-4=5(5) \quad 3-5= -2(7) \quad 6-5= 1(1) \quad 9-5= 4(4) \quad 3-6= -3(6) \quad 6-6= 0(9) \quad 9-6= 3(3) \\
3-7= -4(5) \quad 6-7= -1(8) \quad 9-7=2(2) \quad 3-8= -5(4) \quad 6-8= -2(7) \quad 9-8= 1(1) \quad 3-9= -6(3) \quad 6-9= -3(6) \quad 9-9= 0(9)
\end{array}$$

Above, we see a chart which contains all of the individual 'Subtraction Functions' which are possible between the 'Base Numbers', with this chart being similar to that which was seen in the second section of this chapter, in relation to the 'Complete Addition Function'. Though we can see above that in this case, some of the individual Functions yield non-condensed solutions which possess a 'Negative Base Charge', each of which has been condensed down to its 'Positive Base Charged' Sibling via an instance of 'Positive/Negative Sibling Mirroring'. (The 'Negative Base Charged' non-condensed differences which are seen above are irrelevant to our current purposes, as it is their 'Positive Base Charged' condensed values which we will be working with throughout this section.)

In examining the chart which is seen above, we can see that as is the case in relation to the 'Addition Function', when the 'Base Numbers' are involved in the 'Subtraction Function', it can effect the 'Net Color Charge' of the solution Number in a variety of manners, all of which are shown below. (In these cases which involve the Subtraction of one Number from another Number, one unique 'Color Charge' will alter (or possibly not alter), while also giving off another (possibly Matching) 'Color Charge'. Though the term *giving off* is somewhat inaccurate, in that there is more of a Neutralization involved, with this being an important distinction which will be explained in a moment.)

$$\begin{array}{lll}
\text{Green} - \text{Green} = \text{Blue} & \text{Green} - \text{Red} = \text{Red} & \text{Green} - \text{Blue} = \text{Green} \\
\text{Red} - \text{Red} = \text{Blue} & \text{Red} - \text{Green} = \text{Green} & \text{Red} - \text{Blue} = \text{Red} \\
\text{Blue} - \text{Blue} = \text{Blue} & \text{Blue} - \text{Green} = \text{Red} & \text{Blue} - \text{Red} = \text{Green}
\end{array}$$

Above, we can see in the leftmost vertical column of Interactions that the Subtraction of any 'Color Charge' from itself always yields a 'Blue Charge'. (In the case of 'Blue Charge', this involves the Subtraction of a 'Neutral Charge' from another 'Neutral Charge', with this Function yielding a 'Neutral Charge', in that "+/- - +/- = +/-".) Also, we can see above that the Subtraction of an opposing 'Color Charge' causes a 'Color Charge' to react by changing to whatever 'Color Charge' is being Subtracted from it, in that the Subtraction of a 'Red Charge' from a 'Green Charge' yields a 'Red Charge', the Subtraction of a 'Green Charge' from a 'Red Charge' yields a 'Green Charge', and the Subtraction of a 'Blue Charge' from a 'Blue Charge' yields a 'Blue Charge' (as was mentioned a moment ago). (Furthermore, we can see above that the Subtraction of a 'Blue Charge' from a 'Red Charge' yields a 'Red Charge', and the Subtraction of a 'Blue Charge' from a 'Green Charge' yields a 'Green Charge'. This means that the Subtraction of a 'Blue Charge' has no effect on any of the individual 'Color Charges', which means that the Subtraction of a 'Blue Charge' involves a form of a 'No Change Function'.) While we can also see above that the Subtraction of either of the opposing 'Color Charges' from a 'Blue Charge' yields the opposing 'Color Charge', in that the Subtraction of a 'Green Charge'



from a 'Blue Charge' yields a 'Red Charge', and the Subtraction of a 'Red Charge' from a 'Blue Charge' yields a 'Green Charge'. (This behavior implies that a 'Blue Charge' is comprised of one each of the opposing two 'Color Charges'.)

The behaviors which are described above indicate that the Neutralization which was mentioned a moment ago involves (in relation to Matching 'Color Charges') one Number giving off its own 'Color Charge' to a Subtracted Number, and therefore being left without a 'Color Charge', with this lack of 'Color Charge' being equivalent to the possession of a 'Neutral Color Charge'. (This means that a 'Blue Charge' is equivalent to a 'Neutral Color Charge'.) While in the case of opposing 'Color Charges', this Neutralization involves more of a canceling out, with one Number giving off the opposite of its 'Color Charge', and therefore being left with the opposite of its original 'Color Charge' (with this canceling out involving the fact that the Subtracted 'Color Charge' cancels out the original 'Color Charge'). (This behavior also applies in relation to 'Blue Charge', which is due to the fact that 'Blue Charge' is its own Polar.) All of this indicates that each of the three 'Color Charges' is comprised of two instances of its Polar 'Color Charge', in that one instance of 'Red Charge' is comprised of two instances of 'Green Charge' (as " $\text{Red} - \text{Green} = \text{Green}$ "), one instance of 'Green Charge' is comprised of two instances of 'Red Charge' (as " $\text{Green} - \text{Red} = \text{Red}$ "), and one instance of 'Blue Charge' is comprised of two instances of 'Blue Charge' (as " $\text{Blue} - \text{Blue} = \text{Blue}$ "). While this important characteristic is also indicated in relation to the 'Addition Function' (as was seen in the previous section), in that " $\text{Green} + \text{Green} = \text{Red}$ ", " $\text{Red} + \text{Red} = \text{Green}$ ", and " $\text{Blue} + \text{Blue} = \text{Blue}$ ", though we did not bother to note it at the time. (The various forms of Conservation which are maintained by the three forms of 'Color Charge' will be seen throughout this chapter, and will eventually be examined more thoroughly in "Quantum Mathematics and the Standard Model of Physics Part Six: Seeing Functions as Interactions".)

Also, it should be noted that as is the case with the chart which was seen in relation to 'Complete Addition Function', the Quantities of each of the individual 'Color Charges' which are possessed by the differences which are contained within the chart which is seen above (these being the Colors which are oriented to the right of the "="s) display Matching between one another, in that there are three examples of each of the three 'Color Charges' (again, with one instance of each of the 'Color Charges' being present within each of the horizontal rows). This means that we can confirm that this form of 'Color Charge Parity' is displayed by each of the '(+/-) Sibling Complete Functions'. (Again, this will not be the case in relation to the '(X / /) Sibling Complete Functions', as will be seen a bit later in this chapter.)

Next, we will examine the 'Reactive Charge' which is possessed by the 'Complete Subtraction Function', which is shown below.

'Reactive Charge(1 -, +/-, +/-)(2 -, -, +/-)(3 -)(4 +, -, -)(5 +, +, -)(6 +)(7 +/-, +, +)(8 +/-, +/-, +)(9 +/-)'

Above, we see the 'Reactive Charge' which is possessed by the 'Complete Subtraction Function'. This complete 'Reactive Charge' contains a series of individual Charges which collectively display a pattern which is similar to the pattern which is displayed by the individual Charges which comprise the 'Reactive Charge' which is possessed by the 'Complete Addition Function'. The 'Weak Mirroring' which is displayed between the 'Reactive Charges' of the '(+/-) Sibling Complete Functions' (which will be examined in a moment) is due to the behavioral Mirroring which these two complete 'Reactive Charges' display between one another in relation to a previously noted characteristic, as is explained below.

In relation to the 'Reactive Charge' which is possessed by the 'Complete Addition Function', the individual 'Pure Reactive Charges' of the '3,6,9 Family Group' members cause their Neighboring Charges to display Matching in relation to one another, as well as the 'Pure Reactive Charge' which they surround, where as in relation to the 'Reactive Charge' which is possessed by the 'Complete Subtraction Function', the opposite is true, in that the three 'Pure Reactive Charges' instead cause their Neighboring Charges to display various forms of Mirroring between one another. In this case, the 3 possesses a static 'First Charge' which is behaving as a 'Left Charge' (" - "), and is surrounded by the other two Charges (these being "+/-" and "+"), the 6 possesses a static 'Second Charge' which is behaving as a 'Right Charge' (" + "), and is surrounded by the other two Charges (these being "- " and "+/-"), and the 9 possesses a static 'Third Charge' which is behaving as a 'Center Charge' (" +/- "), and is surrounded by the other two Charges (these being "+" and "- "). (While in all three cases, the individual Charges which are oriented one concentric step outwards from the first two Charges display Matching in relation to their respective centermost 'Pure Reactive Charge', as do the individual Charges which are oriented one concentric step outward from there.)

Next, we will examine the Mirroring which is displayed between the 'Reactive Charges' which are possessed by the '(+/-) Sibling Complete Functions'. This particular form of Mirroring can be seen in the chart of the 'Reactive Charges' which are possessed by the individual 'Collective Subtraction Functions' (including the previously unmentioned 'Collective -0 Subtraction Function'), which displays Mirroring in relation to the chart of the 'Reactive Charges' which are possessed by the individual 'Collective Addition Functions', as is shown below. (In the comparison which is shown below, the chart of the 'Collective Subtraction Functions' involves separate Charges in relation to each of the individual 'Base Numbers', in order to better indicate the Mirroring which is displayed between the two charts.)

'Complete Addition Function'	'Complete Subtraction Function'
+/- +/- +/- +/- +/- +/- +/- +/- +/- +/-	+/- +/- +/- +/- +/- +/- +/- +/- +/- +/-
+/- +/- +/- +/- +/- +/- + + +	- - - +/- +/- +/- +/- +/- +/-
+/- +/- +/- + + + + + +	- - - - - - +/- +/- +/-
+ + + + + + + + + +	- - - - - - - - -
+ + + + + + - - -	+ + + - - - - - -
+ + + - - - - - -	+ + + + + + - - -
- - - - - - - - -	+ + + + + + + + +
- - - - - - +/- +/- +/-	+/- +/- +/- + + + + + +
- - - +/- +/- +/- +/- +/- +/-	+/- +/- +/- +/- +/- +/- + + +
+/- +/- +/- +/- +/- +/- +/- +/- +/-	+/- +/- +/- +/- +/- +/- +/- +/- +/-

Above, we can see that the chart of the individual 'Reactive Charges' which are possessed by the 'Complete Subtraction Function' displays "Flipped Mirroring" in relation to that of the individual 'Reactive Charges' which are possessed by the 'Complete Addition Function'. (To clarify, the term 'Flipped Mirroring' refers to a form of Mirroring which is similar to 'Inverted Mirroring', though where Inversion involves a spin from right to left, like the hands on a clock, Flipping involves a flip from front to back, like a coin flipping through the air.)

Next, we will examine the forms of Mirroring which are displayed between the Color and Reactive Charges which are possessed by the '(+/-) Sibling Complete Functions' (individually), which are shown and explained below. (In the comparison which is shown below, the instances of 'Perfect Mirroring' are all highlighted in opposing green and red, while the instances of 'Perfect Matching' are all highlighted

in blue, with this form of highlighting having been seen previously in "Quantum Mathematics and the Standard Model of Physics Part Four: An Examination of the Four Functions").

**'Color Charge'      'Perfect Mirroring'**

Addition:      'Color Charge(+)(-)(+/-)'

Subtraction:    'Color Charge(-)(+)(+/-)'

**'Reactive Charge'**

**'Weak Mirroring'**

Addition:      'Reactive Charge(1 +/-,+/-,+)(2 +/-,+,+)(3 +)(4 +,+,-)(5 +,-,-)(6 -)(7 -,+,-/+)(8 -,+/-,+/-)(9 +/-)'

Subtraction:    'Reactive Charge(1 -,+/-,+/-)(2 -,+,-/+)(3 -)(4 +,-,-)(5 +,+,-)(6 +)(7 +/-,+,+)(8 +/-,+/-,+)(9 +/-)'

Above, we can see that the '(+/-) Sibling Complete Functions' display overall 'Weak Mirroring' between one another, in that while their 'Color Charges' display 'Perfect Mirroring' between one another, their 'Reactive Charges' display 'Weak Mirroring' between one another. (Though the 'Pure Reactive Charges' of the '3,6,9 Family Group' members all display 'Perfect Mirroring', both individually, as well as between the '(+/-) Sibling Complete Functions', as has been explained previously.)

The 'Weak Mirroring' which is displayed between the complete 'Reactive Charges' which are seen above comes as a bit of a surprise, in that we might have expected the 'Reactive Charges' which are possessed by the '(+/-) Sibling Complete Functions' to display 'Perfect Mirroring' between one another. Though while these two complete 'Reactive Charges' do not display 'Perfect Mirroring' between one another, they do display a variety of other forms of Mirroring and Matching between one another, all of which are included in the endnotes of this chapter.

To recap, in this section, we have determined that the 'Complete Subtraction Function' displays various forms of Mirroring in relation to the 'Complete Addition Function', in that the 'Color Charges' which are possessed by the '(+/-) Sibling Complete Functions' display 'Perfect Mirroring' between one another, while the 'Reactive Charges' which are possessed by the '(+/-) Sibling Complete Functions' display a Weaker though more complex form of Mirroring between one another. (Again, the other forms of Mirroring which are displayed between the 'Reactive Charges' which are possessed by the '(+/-) Sibling Complete Functions' are included in the endnotes of this chapter.)

That brings our examination of the 'Complete Subtraction Function', and therefore this section, to a close.

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Next, we will examine the 'Complete Multiplication Function', starting with a list of the Color and Reactive Charges which are possessed by the nine individual 'Collective Multiplication Functions', which is shown below.

- 'Collective X1 Multiplication Function': 'Color Charge(+/-)',      'Reactive Charge(+/-)'
- 'Collective X2 Multiplication Function': 'Color Charge(+, -, +/-)', 'Reactive Charge(+/-,+,-)(+,-,+/-)(+,-,+/-)'
- 'Collective X3 Multiplication Function': 'Color Charge(-, +, +/-)', 'Reactive Charge(+/-,-,+)(+,+/-,-)(-,+,+/-)'
- 'Collective X4 Multiplication Function': 'Color Charge(+/-)',      'Reactive Charge(+)(-)(+/-)'
- 'Collective X5 Multiplication Function': 'Color Charge(+, -, +/-)', 'Reactive Charge(+,-,+/-)(+/-,+,-)(+,-,+/-)'
- 'Collective X6 Multiplication Function': 'Color Charge(-, +, +/-)', 'Reactive Charge(+,+/-,-)(+/-,-,+)(-,+,+/-)'
- 'Collective X7 Multiplication Function': 'Color Charge(+/-)',      'Reactive Charge(-)(+)(+/-)'
- 'Collective X8 Multiplication Function': 'Color Charge(+, -, +/-)', 'Reactive Charge(-,+/-,+)(-,+/-,+)(+,-,+/-)'
- 'Collective X9 Multiplication Function': 'Color Charge(-, +, +/-)', 'Reactive Charge(-)(+)(+/-)'

Above, we can see that the 'Complete Multiplication Function' possesses a 'Color Charge(+/-)(+, -, +/-) (-, +, +/-)'. The descriptor of 'Color Charge(+/-)(+, -, +/-) (-, +, +/-)' contains more individual Charges within its sets of parentheses than is the case in relation to the descriptors of the 'Color Charges' which are possessed by either of the '(+/-) Sibling Complete Functions' (with the exception of the first set of parentheses, which only contains one Charge). This excess of Charges is due to the fact that the behavior of the individual (Collective) 'Color Charges' with which we are currently working can vary based on the Family Group membership of the Number which the Function Number is Interacting with, which is not the case in relation to either of the '(+/-) Sibling Complete Functions'. This means that in relation to the 'Multiplication Function', two of the static 'Color Charges' which are possessed by the 'Base Numbers' (these being 'Red Charge' and 'Blue Charge') Interact differently in relation to each of the individual Family Groups (in that they act as a varying 'Up Charge', 'Down Charge', or 'Middle Charge'), with this being a characteristic which is not displayed by either of the '(+/-) Sibling Complete Functions'. While in this case, 'Green Charge' Interacts in the same manner with all nine members of the 'Base Set', and therefore the 'Green Charged Numbers' (these being the '1,4,7 Family Group' members) contain only one Charge within their set of parentheses, as was mentioned a moment ago.

Next, we will examine the 'Reactive Charge' which is possessed by the 'Complete Multiplication Function', which is shown below.

'Reactive Charge(1 +/-)(2 +/,-,+,-, +,-,+/-, +,-,+/-)(3 +/,-,+,-, +,+/-,-,-,+,-,+/-)(4 +,-,+/-)(5 +,-,+/-, +/-,+,-, +,-,+/-)(6 +,+/-,-,+/-,-,+,-,+,-,+/-)(7 -,+,-,+/-)(8 -,+/-,+,-,+/-,+,-,+/-)(9 -,+,-,+/-)'

The complete 'Reactive Charge' which is seen above displays a complex form of 'Family Group Mirroring' (in relation to itself) which will be examined in the endnotes of this chapter.

The complexity of this overall 'Reactive Charge' can also be seen in a chart of the 'Reactive Charges' which are possessed by the 'Collective Multiplication Functions' of the nine 'Base Numbers', which is shown below. (The chart which is shown below does not include the 'Reactive Charge' which is possessed by the 'X0 Multiplication Function'.)

+/ -	+ / -	+ / -	+ / -	+ / -	+ / -	+ / -	+ / -	+ / -
+ / -	+	-	+	-	+ / -	+	-	+ / -
+ / -	-	+	+	+ / -	-	-	+	+ / -
+	-	+ / -	+	-	+ / -	+	-	+ / -
+	-	+ / -	+ / -	+	-	+	-	+ / -
+	+ / -	-	+ / -	-	+	-	+	+ / -
-	+	+ / -	-	+	+ / -	-	+	+ / -
-	+ / -	+	-	+ / -	+	+	-	+ / -
-	+	+ / -	-	+	+ / -	-	+	+ / -

Above, we can see that the 'Reactive Charges' which are contained within this chart display a Weak form of Mirroring between one another, which is due in part to the fact that none of the '3,6,9 Family Group' members possess a 'Pure Reactive Charge' in relation to the 'Multiplication Function'. (As can be seen above, the 1 is the only 'Base number' which possesses a 'Pure Reactive Charge' in relation to the 'Multiplication Function'.) Though the chart which is seen above does share a previously unmentioned characteristic with the charts of the 'Reactive Charges' which are possessed by the various 'Collective Addition Functions' and the 'Collective Subtraction Functions', in that all of the vertical

columns of Charges Add to a 'Neutral Charge'. (This characteristic arises due to the fact that in relation to all three of these charts, each of the vertical columns contain equal Quantities of Positive and Negative Charges.)

Next, we will examine a chart which contains all of the individual 'Multiplication Functions' which are possible between the 'Base Numbers', which is shown below (with all of the Numbers highlighted in a 'Color Charge' color code). (This chart involves empty space at the bottom of two of its vertical columns, as is the case in relation to the chart of all of the individual 'Addition Functions' which are possible between the 'Base Numbers', and this is again due to the fact that the characteristic of Non-Locality negates the need for us to include any of those redundant Functions.)

1X1=1	4X1=4	7X1=7	1X2=2	4X2=8	7X2=5	1X3=3	4X3=3	7X3=3
1X4=4	4X4=7	7X4=1	1X5=5	4X5=2	7X5=8	1X6=6	4X6=6	7X6=6
1X7=7	4X7=1	7X7=4	1X8=8	4X8=5	7X8=2	1X9=9	4X9=9	7X9=9
			2X2=4	5X2=1	8X2=7	2X3=6	5X3=6	8X3=6
			2X5=1	5X5=7	8X5=4	2X6=3	5X6=3	8X6=3
			2X8=7	5X8=4	8X8=1	2X9=9	5X9=9	8X9=9
						3X3=9	6X3=9	9X3=9
						3X6=9	6X6=9	9X6=9
						3X9=9	6X9=9	9X9=9

We can see above that as is the case in relation to the Addition and Subtraction Functions, when the 'Base Numbers' are involved in the 'Multiplication Function', it can effect the 'Net Color Charge' of the solution Number in a variety of manners, all of which are shown below. (As was explained in the first section of this chapter, the 'Multiplication Function' involves two separate Numbers merging into one single Number, as is the case in relation to the 'Addition Function'. Therefore, in these cases, we will be treating this merging of 'Color Charges' as though it involves two 'Color Charges' merging together to form one (possibly) new 'Color Charge'.)

Green X Green = Green	Green X Red = Red	Green X Blue = Blue
Red X Red = Green	Red X Green = Red	Red X Blue = Blue
Blue X Blue = Blue	Blue X Green = Blue	Blue X Red = Blue

Above, we can see in the leftmost column of Interactions that the Multiplication of 'Green Charge' by itself yields a 'Green Charge' (in that "Green X Green = Green"), as is also the case in relation to the Multiplication of 'Red Charge' by itself (in that "Red X Red = Green"), while the Multiplication of 'Blue Charge' by itself yields a 'Blue Charge' (in that "Blue X Blue = Blue"). Also, we can see above that the Multiplication of the opposing 'Color Charges' by one another yields a 'Red Charge', in that "Green X Red = Red", and "Red X Green = Red", while the Multiplication of either of these opposing Charges by a 'Blue Charge' yields a 'Blue Charge', in that "Green X Blue = Blue", and "Red X Blue = Blue". This behavior is indicative of the fact that in this case, 'Blue Charge' is displaying Attractive behavior, in that any 'Color Charge' which 'Blue Charge' Interacts with through the 'Multiplication Function' is drawn over to 'Blue Charge', independent of its original 'Color Charge'. This means that in relation to the 'Multiplication Function', 'Blue Charge' is 'Color Charge Attractive'. (The quality of 'Color Charge Attraction' has been seen previously in "Quantum Mathematics and the Standard Model

of Physics Part Four: An Examination of the Four Functions", where it was referred to as *'Family Group Attraction'*.)

Also, it should be noted that the chart which is seen above displays an alteration of the previously established characteristic which is displayed by the similar charts of the Addition and Subtraction Functions, with this characteristic involving the fact that the Quantities of each of the individual 'Color Charges' which are possessed by the solutions (these being the Colors which are oriented to the right of "=") all display Matching between one another. In relation to the 'Complete Multiplication Function', this Parity is not displayed, and we instead have two instances of 'Green Charge', two instances of 'Red Charge', and five instances of 'Blue Charge'.

The loss of Parity which is described above arises due to the fact that in relation to the 'Multiplication Function', the three 'Color Charges' behave in a manner which involves an extension of the concept of 'Neutral Matching'. We are already aware of the fact that a Neutral, when it is Added or Subtracted, has no effect on a Positive or a Negative (in that " $+ + +/- = +$ ", " $+ - +/- = +$ ", " $- + +/- = -$ ", and " $- - +/- = -$ "), while we are also aware of the fact that two Neutrals always Add or Subtract to a Neutral (in that " $+/- + +/- = +/-$ " and " $+/- - +/- = +/-$ "), with this being the behavior which we have seen 'Blue Charge' display in relation to each of the '(+/-) Sibling Functions'. Though throughout this section, we have seen that in relation to the 'Multiplication Function', 'Blue Charge' does not act as a traditional Neutral, it instead acts Attractively, as was explained a moment ago. This Attraction draws one each of the 'Green Charges' and the 'Red Charges' over to 'Blue Charge', thus yielding the imbalance. (The manner in which this Attractive behavior pertains to 'Neutral Matching' will be explained in a moment.)

Previously, we determined that the Addition or Subtraction of 'Green Charge' and 'Red Charge' to or from one another causes these 'Color Charges' to display behaviors which indicate that they are each comprised of two instances of the opposing 'Color Charge', in that " $Green + Green = Red$ ", and " $Red + Red = Green$ ". Though in this case, this form of reciprocity is not displayed, in that while the Multiplication of a 'Red Charge' by another 'Red Charge' yields a 'Green Charge', the Multiplication of a 'Green Charge' by another 'Green Charge' also yields a 'Green Charge', as opposed to the expected 'Red Charge'. This means that in relation to the 'Multiplication Function', all three of the 'Color Charges' display a familiar and easily definable behavior, in that the 'Color Charges' behave in the same manner as the opposing 'Base Charges' which are possessed by traditional Positive and Negative (and Neutral) Numbers when they are Multiplied by one another, as is explained below.

In relation to traditional Mathematics, the Multiplication of a 'Positive Base Charged Number' by another 'Positive Base Charged Number' will always yield a product which possesses a 'Positive Base Charge' (for example, " $3 \times 3 = 9$ "), while the Multiplication of a 'Negative Base Charged Number' by another 'Negative Base Charged Number' will also always yield a product which possesses a 'Positive Base Charge' (for example, " $-3 \times -3 = 9$ "), with this being the same behavior which is being displayed by the two opposing 'Color Charges'. When 'Green Charge' is Multiplied by 'Green Charge', the product which is yielded always possess a 'Green Charge', with these 'Green Charges' acting as Positives (in that "Positive X Positive = Positive"). While when 'Red Charge' is Multiplied by 'Red Charge', the product which is yielded also always possesses a 'Green Charge', with these 'Red Charges' acting as Negatives (in that "Negative X Negative = Positive"). Also, when 'Green Charge' is Multiplied by 'Red Charge', the product which is yielded always possesses a 'Red Charge', with this behavior displaying Matching in relation to that which is displayed when a 'Positive Base Charged Number' is Multiplied by a 'Negative Base Charged Number' (in that the product which is yielded in that case always

possesses a 'Negative Base Charge'). While in this case, 'Blue Charge' acts as a default 'Neutral Charge', and therefore displays behavior which is similar to that which is displayed by the 0, which itself is a 'Neutral Base Charged Number', in that it does not possess a Positive or Negative 'Base Charge'. (The concept of the 0 being a 'Neutral Base Charged Number' will be revisited in "Quantum Mathematics and the Standard Model of Physics Part Eight: Sibling Similarity and Base Charge".) Furthermore, in relation to traditional Mathematics, Multiplication by the 0 will always yield a product of 0, which means that technically, the 'X0 Multiplication Function' would be considered to be an 'Attractive Function', with this being the behavior which 'Blue Charge' has displayed throughout this section, in that 'Blue Charge' has been behaving Attractively in relation to the 'Multiplication Function'.

This is all indicative of the fact that in relation to the 'Multiplication Function', the three 'Color Charges' behave in the same manner in which Positive, Negative, and Neutral 'Base Charged' Numbers do when they are Multiplied by one another. We will examine this behavior more thoroughly in relation to the 'Complete Division Function', which will be the subject of the next section of this chapter.

That brings our examination of the 'Complete Multiplication Function', and therefore this section, to a close.

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Next, we will examine the 'Complete Division Function'. We will start with a list of the Color and Reactive Charges which are possessed by five of the nine individual 'Collective Division Functions', which is shown below. (The "\*"s which are seen below indicate the Color and Reactive Charges which are possessed by the 'Collective /3 Division Function', the 'Collective /6 Division Function', the 'Collective /7 Division Function', and the 'Collective /9 Division Function', none of which can be determined at this point due to the fact that all of these Collective Functions are currently Invalid, in that their constituent 'Division Functions' all yield 'Infinitely Repeating Decimal Number' quotients which would be of no immediate use to us here.)

'Collective /1 Division Function':	'Color Charge(+/-)',	'Reactive Charge(+/-)'
'Collective /2 Division Function':	'Color Charge(+, -, +/-)',	'Reactive Charge(+,-,+/-)(+/-,+,-)(+,-,+/-)'
'Collective /3 Division Function':	'Color Charge(*)',	'Reactive Charge(*)'
'Collective /4 Division Function':	'Color Charge(+/-)',	'Reactive Charge(-)(+)(+/-)'
'Collective /5 Division Function':	'Color Charge(+, -, +/-)',	'Reactive Charge(+/-,+,-)(+,-,+/-)(+,-,+/-)'
'Collective /6 Division Function':	'Color Charge(*)',	'Reactive Charge(*)'
'Collective /7 Division Function':	'Color Charge(*)',	'Reactive Charge(*)'
'Collective /8 Division Function':	'Color Charge(+, -, +/-)',	'Reactive Charge(-,+/-,+)(-,+/-,+)(+,-,+/-)'
'Collective /9 Division Function':	'Color Charge(*)',	'Reactive Charge(*)'

Above, we can see that the 'Complete Division Function' possesses a 'Color Charge(+/-\*)(+,-,+/-)(\*\*\*)', with the "\*"s which are contained within this descriptor indicating the undetermined 'Color Charges' which are possessed by the four Invalid 'Collective Division Functions'. This means that the 1 and the 4 appear to be the only Numbers which possess a 'Pure Color Charge' in relation to the 'Complete Division Function'. Though this is not actually the case, as their fellow Family Group member the 7 also possesses a 'Pure Color Charge' in relation to the 'Complete Division Function', as will be seen in "Chapter Eight: Solving the Invalid Functions". We will examine the 'Perfect Mirroring' which is

displayed between the 'Color Charges' which are possessed by the '(X / /) Sibling Complete Functions' towards the end of this section, after we examine the 'Reactive Charge' which is possessed by the 'Complete Division Function'.

Though at this point, due to the various 'Invalid Functions', we can only determine that the 'Complete Division Function' possesses the incomplete 'Reactive Charge' which is shown below (with the "\*"s" which are contained within this descriptor indicating the undetermined 'Reactive Charges' which are possessed by the four Invalid 'Collective Functions').

'Reactive Charge(1 +/-)(2 +,-,+/-, +/-,+,-, +,-,+/-)(3\*)(4 -,+,+/-)(5 +/-,+,-, +,-,+/-, +,-,+/-) (6\*) (7\*)(8 -,+,+,-,+/-,+,-,+/-)(9\*)'

The 'Family Group Mirroring' which is displayed between the Numerically Related sets of parentheses which are contained within the complete 'Reactive Charge' which is seen above will be examined in the endnotes of this chapter.

Also, before we move on, it should be briefly mentioned that at this point, we cannot examine a complete chart of the 'Reactive Charges' which are possessed by the nine 'Collective Division Functions', as we have yet to determine the specifics of the 'Reactive Charges' which are possessed by the 'Collective /3 Division Function', the 'Collective /6 Division Function', and the 'Collective /9 Division Function'.

Next, we will examine the various forms of Mirroring and Matching which are displayed between the overall Color and Reactive Charges which are possessed by the '(X / /) Sibling Complete Functions' (individually), all of which are shown and explained below, starting with the incomplete instance of Matching which is displayed between the 'Color Charges' which are possessed by the '(X / /) Sibling Complete Functions'.

'Color Charge'                      **(Incomplete) Matching**  
 Multiplication: 'Color Charge(+/-)(+,-,+/-)(-,+,+/-)'  
 Division:                      'Color Charge(+/-\*)(+,-,+/-)(\*\*\*)'

Above, we can see that there are elements of exact Matching displayed between these two 'Color Charges', though due to the four Invalid 'Collective Division Functions' (all of which are represented above with "\*"s"), we cannot determine whether or not this exact Matching maintains throughout these complete 'Color Charges'.

Next, we will examine the various forms of Mirroring and Matching which are displayed between the 'Reactive Charges' which are possessed by the '(X / /) Sibling Complete Functions', all of which are shown below. (First, we will examine the instances of Mirroring and Matching which are displayed between the overall 'Reactive Charges' which are possessed by the '(X / /) Sibling Complete Functions', and then we will examine the specifics of how the various groups of three Charges which are contained within these 'Reactive Charges' all display Mirroring and Matching between one another in relation to Related Numbers.)



**'Reactive Charge'** (incomplete) **'Perfect Matching'**, **'Cross Matching'**, and **'Perfect Mirroring'**  
 Multiplication: 'Reactive Charge(1 +/-)(2 +/-,+,-, +,-,+/-, +,-,+/-)(3 +/-,-,+ ,+/-,-, -,+,+/-)(4 +,-,+/-)(5 +,-,+/-, +/-,+,-, +,-,+/-)(6 +,+/-,-, +/-,-,+ ,-,+,+/-)(7 -,+,+/-)(8 -,+/-,+ ,-,+/-,+ ,+,-,+/-)(9 -,+,+/-)'  
 Division: 'Reactive Charge(1 +/-)(2 +,-,+/-, +/-,+ ,-, +,-,+/-)(3\*)(4 -,+,-,+/-)(5 +/-,+,-, +,-,+/-, +,-,+/-) (6\*) (7\*)(8 -,+/-,+ ,-,+/-,+ ,+,-,+/-)(9\*)'

While we are somewhat hindered by the four Invalid 'Collective Division Functions', we can still see above that there are various forms of Mirroring and Matching displayed between the Numerically Matching sets of parentheses which involve Valid 'Collective Division Functions'. In relation to the members of the '1,4,7 Family Group', the sets of parentheses of the 1 display 'Perfect Matching' between their lone Charges, while the sets of parentheses of the 4 display 'Perfect Mirroring' between one another (as will be explained in a moment). Furthermore, in relation to the members of the '2,5,8 Family Group', the centermost of the Charges which are contained within the first two of the groups of Charges which are contained within the sets of parentheses of the '2/5 Cousins', all display 'Perfect Mirroring' between one another (in that they all involve a "+" and a "-") and the rightmost of the Charges which are contained within the third of the groups of Charges all display 'Perfect Matching' between one another (in that they all involve two "+/-'s"), while the centermost of the Charges which are contained within the first two of the groups of Charges which are contained within the sets of parentheses of the 8 display 'Perfect Matching' between one another, as do the rightmost of the Charges which are contained within the third of the groups of Charges.

Next, we will take a closer look at the various forms of Mirroring and Matching which are displayed between the Numerically Matching sets of parentheses of the 'Reactive Charges' which are possessed by the '(X / /) Sibling Complete Functions', all of which is shown and explained below.

As was mentioned a moment ago, in relation to the members of the '1,4,7 Family Group', the sets of parentheses of the 1's display 'Perfect Matching' between one another, while those of the 4's display 'Perfect Mirroring' between one another, as is shown below.

	<b>'Perfect Matching'</b>	<b>'Perfect Mirroring'</b>
'Complete Multiplication Function':	(1 +/-)	(4 +,-,+/-)
'Complete Division Function':	(1 +/-)	(4 -,+,-,+/-)

Above, we see the previously established instances of 'Perfect Mirroring' and 'Perfect Matching' which are displayed between the individual Charges which are contained within the sets of parentheses of the 1 and the 4. (However, the examples which involve the sets of parentheses of the members of the 2,5,8 and 3,6,9 Family Groups will all involve the Mirroring and/or Matching which is displayed between groups of three Charges, as will be seen in a moment.)

Also (still working with the members of the '1,4,7 Family Group'), while we cannot compare the sets of parentheses of the 7's (due to the Invalid 'Collective /7 Division Function'), all indications are that the set of parentheses of the 'Collective /7 Division Function' would contain a group of three Charges which displays 'Perfect Mirroring' in relation to the group of three Charges which is contained within the set of parentheses of the 'Collective X7 Multiplication Function', and exact Matching in relation to the group of three Charges which is contained within the set of parentheses of the 'Collective X4

'Multiplication Function' (and therefore 'Perfect Mirroring' in relation to the group of three Charges which is contained within the set of parentheses of the 'Collective /4 Division Function'), as is shown below. (The "\*" which is seen below represents the "+,-,+/-" group which is assumed to be contained within the set of parentheses of the 'Collective /7 Division Function'.)

**(assumed) 'Perfect Mirroring'**

'Complete Multiplication Function':  $(1 \text{ +/-})(4 \text{ +,-,+/-})(7 \text{ -,+,+/-})$   
 'Complete Division Function':  $(1 \text{ +/-})(4 \text{ -,+,+/-})(7^*)$

Above, we can see that the assumed group of Charges which is represented by the "\*" would display 'Perfect Mirroring' in relation to the group of charges which is contained within the parentheses of the 'Collective X7 Multiplication Function'. While this assumed group of Charges would also contribute to the overall form of 'Cross Matching' which is displayed between the sets of parentheses of the '1,4,7 Family Group' members, as is shown below (with an alternate form of arbitrary highlighting which indicates this assumed form of 'Cross Matching'). (To clarify, the "\*" which is seen below again represents the "+,-,+/-" group which is assumed to be contained within the set of parentheses of the 'Collective /7 Division Function', which in this case would be highlighted exclusively in green.)

**(assumed) 'Cross Matching'**

'Complete Multiplication Function':  $(1 \text{ +/-})(4 \text{ +,-,+/-})(7 \text{ -,+,+/-})$   
 'Complete Division Function':  $(1 \text{ +/-})(4 \text{ -,+,+/-})(7^*)$

While in relation to the members of the '2,5,8 Family Group', the Numerically Matching sets of parentheses of the '2/5 Cousins' (all of which involve three groups of three Charges) each display a form of 'Cross Matching' between one another, as is shown below (with arbitrary highlighting).

	<b>'Cross Matching'</b>	<b>'Cross Matching'</b>
'Complete Multiplication Function':	$(2 \text{ +/-,+,-, +,-,+/-, +,-,+/-})$	$(5 \text{ +,-,+/-, +/-,+,-, +,-,+/-})$
'Complete Division Function':	$(2 \text{ +,-,+/-, +/-,+,-, +,-,+/-})$	$(5 \text{ +/-,+,-, +,-,+/-, +,-,+/-})$

The overall example which is seen above only involves green and red highlighting (with no instances of blue highlighting), which is due to the fact that these four sets of parentheses only contain instances of two unique groups of Charges, with these two groups of Charges displaying orientational Mirroring between the sets of parentheses of the '2/5 Cousins', in that the "+,-,+,-" group is oriented to the upper-left and lower-center of the sets of parentheses of the 2, while this same "+,-,+,-" group is oriented to the lower-left and upper-center of the sets of parentheses of the 5.

Also, these same four sets of parentheses display an overall form of 'Cross Matching' between one another, as is shown below (with arbitrary highlighting).

	<b>'Cross Matching'</b>	<b>'Cross Matching'</b>
'Complete Multiplication Function':	$(2 \text{ +/-,+,-, +,-,+/-, +,-,+/-})$	$(5 \text{ +,-,+/-, +/-,+,-, +,-,+/-})$
'Complete Division Function':	$(2 \text{ +,-,+/-, +/-,+,-, +,-,+/-})$	$(5 \text{ +/-,+,-, +,-,+/-, +,-,+/-})$

Above, we can see that these four sets of parentheses display 'Cross Matching' between one another, in that the set of parentheses of the 'Collective X2 Multiplication Function' displays Matching in relation to the set of parentheses of the 'Collective /5 Division Function', and the set of parentheses of the

'Collective X5 Multiplication Function' displays Matching in relation to the set of parentheses of the 'Collective /2 Division Function'.

Furthermore, the sets of parentheses of the 'Self-Cousin 8' display exact Matching between one another, as is shown below (with arbitrary highlighting).

**exact Matching**

'Complete Multiplication Function': (8 - ,+/- ,+ , - ,+/- ,+ , + , - ,+/-)  
 'Complete Division Function': (8 - ,+/- ,+ , - ,+/- ,+ , + , - ,+/-)

The previous three examples indicate that the sets of parentheses of the '2,5,8 Family Group' members contain instances of only three unique sets of Charges, as is shown below (with arbitrary highlighting).

"X": (2 +/- ,+ , - , + , - ,+/- , + , - ,+/-) (5 + , - ,+/- , +/- ,+ , - , + , - ,+/-) (8 - ,+/- ,+ , - ,+/- ,+ , + , - ,+/-)  
 " / ": (2 + , - ,+/- , +/- ,+ , - , + , - ,+/-) (5 +/- ,+ , - , + , - ,+/- , + , - ,+/-) (8 - ,+/- ,+ , - ,+/- ,+ , + , - ,+/-)

Above, we can see that the sets of parentheses of the '2,5,8 Family Group' members contain instances of three unique groups of Charges (these being "+/-,+,-", "+,-,+/-", and "-,+/-,+", which are highlighted in green, red, and blue, respectively), all of which display 'Shifted Matching' between one another.

Also, before we move on, it should be mentioned that the 'Cross Matching' which is displayed between each of the Numerically Matching sets of parentheses of the '2/5 Cousins' could also be considered to be a form of 'Shifted Matching', as is shown below. (In this example, the Matching sets of Charges are highlighted arbitrarily in green, red, and blue.)

	<b>'Shifted Matching'</b>	<b>'Shifted Matching'</b>
'Complete Multiplication Function':	(2 <span style="color: green;">+/- ,+ , - , + , - ,+/- , + , - ,+/-</span> )	(5 <span style="color: red;">+ , - ,+/- , +/- ,+ , - , + , - ,+/-</span> )
'Complete Division Function':	(2 <span style="color: blue;">+ , - ,+/- , +/- ,+ , - , + , - ,+/-</span> )	(5 <span style="color: green;">+/- ,+ , - , + , - ,+/- , + , - ,+/-</span> )

Above, we can see that the sets of parentheses of the 2's display 'Shifted Matching' between one another, in that each of the Matching groups of Charges has the bottommost group Shifted one step to the right. While the Shift is Mirrored in relation to the sets of parentheses of the 5's, in that each of the Matching groups of Charges has the bottommost group of Charges Shifted one step to the left.

Next, we will examine a chart which contains all of the individual 'Division Functions' which are possible between the 'Base Numbers', which is shown below (with all of the Numbers highlighted in a 'Color Charge' color code). (This chart is complete, in that there are no excluded Functions, due to the quality of Locality which is possessed by the 'Division Function'. While this chart also contains a variety of "\*"s", with the "\*"s" which stand alone indicating 'Infinitely Repeating Decimal Number' solutions which would be of no immediate use to us, and the "\*"s" which are preceded by a Number indicating intuitive though incorrect solutions, all of which will be explained in a moment.)

1/1=1	4/1=4	7/1=7	1/2=5	4/2=2	7/2=8	1/3=*	4/3=*	7/3=*
1/4=7	4/4=1	7/4=4	1/5=2	4/5=8	7/5=5	1/6=*	4/6=*	7/6=*
1/7=*	4/7=*	7/7=1	1/8=8	4/8=5	7/8=2	1/9=*	4/9=*	7/9=*
2/1=2	5/1=5	8/1=8	2/2=1	5/2=7	8/2=4	2/3=*	5/3=*	8/3=*
2/4=5	5/4=8	8/4=2	2/5=4	5/5=1	8/5=7	2/6=*	5/6=*	8/6=*
2/7=*	5/7=*	8/7=*	2/8=7	5/8=4	8/8=1	2/9=*	5/9=*	8/9=*
3/1=3	6/1=6	9/1=9	3/2=6	6/2=3	9/2=9	3/3=1*	6/3=2*	9/3=3*
3/4=3	6/4=6	9/4=9	3/5=6	6/5=3	9/5=9	3/6=5*	6/6=1*	9/6=6*
3/7=*	6/7=*	9/7=*	3/8=6	6/8=3	9/8=9	3/9=*	6/9=*	9/9=1*

As is the case in relation to the Addition, Subtraction, and Multiplication Functions, when the 'Base Numbers' are involved in the 'Division Function', it can effect the 'Net Color Charge' of the solution Number in a variety of manners, all of which are shown below. (To clarify, even though the 'Division Function' involves a separation (as was explained in the first section of this chapter), in this case, we will be treating this seeming merging of 'Color Charges' as though it were two Charges merging together to form one (possibly) new Charge, as is also the case in relation to the Addition and Multiplication Functions. This is due to the fact that the quotients which are yielded by each of the individual 'Division Functions' will always display Matching between one another (as was explained earlier), and we are currently working with only one representative sample of the Matching quotients.)

Green / Green = Green*	Green / Red = Red	Green / Blue = *
Red / Red = Green	Red / Green = Red*	Red / Blue = *
Blue / Blue = **	Blue / Green = Blue*	Blue / Red = Blue

Above, we can see that these Functions display behavior which is similar to that which is displayed in relation to the 'Complete Multiplication Function', in that these 'Color Charges' again display behavior which is similar to that which Positive, Negative, and Neutral 'Base Charged' Numbers display when they are Divided by one another. In traditional Mathematics, the Division of a 'Positive Base Charged Number' by another 'Positive Base Charged Number' will always yield a quotient which possesses a 'Positive Base Charge' (for example, "4/2=2"), while the Division of a 'Negative Base Charged Number' by another 'Negative Base Charged Number' will also always yield a quotient which possesses a 'Positive Base Charge' (for example, "-4 / -2 = 2"), with this being the behavior which is displayed by the two opposing 'Color Charges', in that the Division of 'Green Charge' by 'Green Charge' yields a quotient which possesses a 'Green Charge' (with these 'Green Charges' acting as Positives, in that "Positive / Positive = Positive"), and the Division of 'Red Charge' by 'Red Charge' also yields a quotient which possesses a 'Green Charge' (with these 'Red Charges' acting as Negatives, in that "Negative / Negative = Positive"). While the Division of 'Green Charge' by 'Red Charge' (and vice versa) yields a quotient which possesses a 'Red Charge', with this Function maintaining the established behavior, in that "Positive / Negative = Negative" and "Negative / Positive = Negative" (for example "4 / -2 = -2", and "-4 / 2 = -2"). (The behaviors which are described in this paragraph exclude the individual '/7 Division Functions', which are currently Invalid, and are represented above with "\*"s".)

Furthermore, we can see above that in relation to the 'Division Function', 'Blue Charge' acts as a default 'Neutral Charge', as it also does in relation to the 'Multiplication Function', in that when 'Blue Charge' is Divided by either of the other 'Color Charges', it maintains its 'Blue Charge'. (In terms of traditional

Mathematics, this would be equivalent to the Functions of "Neutral / Positive = Neutral" and "Neutral / Negative = Neutral", with this being the same behavior which is displayed by the 0, in that for example "0/2=0", and "0 / -2 = 0".) Though as can be seen in the chart which is shown above, when the 'Blue Charged Numbers' are Divided by one another, they seemingly yield a series of quotients which possess varying 'Net Color Charges' (as is indicated above by the lone "\*\*\*"), in that some of the quotients seem to possess a 'Green Charge', while others seem to possess a 'Red Charge', which would be the first time which we have seen this dual Color characteristic displayed by a set of nine 'Intra-Family Group Functions'. However, this is the incorrect assumption which was mentioned a moment ago, in that the seemingly Valid 'Intra-3,6,9 Family Group Division Functions' are not as Valid as they appear to be, as has been mentioned in previous chapters. (To clarify, we might have expected 'Blue Charge' to combine with itself to maintain its 'Blue Charge', which is the behavior which is actually being displayed through these Functions, as will be explained in "Chapter Eight: Solving the Invalid Functions".) Also, we can see above that the Division of 'Green Charge' by 'Blue Charge' involves a series of 'Invalid Functions', as does the Division of 'Red Charge' by 'Blue Charge', as is indicated by the two "\*"s". Though while we are currently unable determine the 'Color Charges' which are possessed the quotients which are yielded by the Functions of "Green / Blue" and "Red / Blue", it will eventually be determined in "Chapter Eight: Solving the Invalid Functions" that each of these Functions yields quotients which possess a 'Blue Charge'. All of this means that 'Blue Charge' is 'Color Charge Attractive' in relation to the 'Division Function', which means that we can confirm that 'Blue Charge' is 'Color Charge Attractive' in relation to both of the '(X / /) Sibling Complete Functions'.

Also, it should be noted that with the inclusion of the quotients which are yielded by the 'Invalid Functions', the chart which is seen above (on the previous page) displays the same characteristic which is displayed by the similar chart of the 'Complete Multiplication Function', in that the Quantities of each of the individual 'Color Charges' which are possessed by the solutions (these being the Colors which are oriented to the right of "=") involve two instances of 'Green Charge', two instances of 'Red Charge', and five instances of 'Blue Charge'.

That brings our examination of the 'Complete Division Function', and therefore this section, to a close.

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That brings this Standard Model of Physics themed chapter to a close (with the exception of the endnotes, which are included below). In this chapter, we have renamed the overall concepts of 'Color Charge' and 'Reactive Charge', which were formerly referred to as '*Family Group Charge*' and '*Family Group Reactivity*', respectively. We have also determined that each of the 'Base Numbers' possesses one of the three static 'Color Charges', these being 'Green Charge', 'Red Charge', and 'Blue Charge', each of which can behave as either an 'Up Charge', a 'Down Charge', or a 'Middle Charge', depending on the circumstances. While we have also determined that in addition to 'Color Charge', each of the 'Base Numbers' also possesses one of three static 'Reactive Charges', these being 'First Charge', 'Second Charge', and 'Third Charge', each of which can behave as either a 'Right Charge', a 'Left Charge', or a 'Center Charge', depending on the circumstances. (In "Quantum Mathematics and the Standard Model of Physics Part Four: An Examination of the Four Functions", we had mistakenly assumed that it is the Functions which possess these Charges. Though in this chapter, we have determined that it is actually the Numbers themselves which possess these inherent Charges, while the 'Four Functions' merely possess inherent qualities which elicit reactions from the Charges.) While in "Quantum Mathematics

and the Standard Model of Physics Part Six: Seeing Functions as Interactions", we will examine some of these same individual Functions as Interactions (in which the Numbers will be represented as Quanta), which will allow us to gain a better understanding of the behaviors which the Color and Reactive Charges display when they Interact with themselves through the 'Four Functions'.

## Endnotes

In these endnotes, we will examine the additional forms of Mirroring and Matching which are displayed between the 'Reactive Charges' which are possessed by the '(+/-) Sibling Complete Functions', as well as the forms of 'Family Group Mirroring' which are displayed by the 'Reactive Charges' which are possessed by each of the '(X / /) Sibling Complete Functions', all of which is shown and explained below, starting with the additional forms of Mirroring and Matching which are displayed between the 'Reactive Charges' which are possessed by the '(+/-) Sibling Complete Functions'.

Addition: 'Reactive Charge(1 +/-,+/-,+)(2 +/-,+)(3 +)(4 +,+,-)(5 +,-,-)(6 -)(7 -,-,+/-)(8 -,+/-,+/-)(9 +/-)'  
 Subtraction: 'Reactive Charge(1 -,+/-,+/-)(2 -,-,+/-)(3 -)(4 +,-,-)(5 +,+,-)(6 +)(7 +/-,+)(8 +/-,+)(9 +/-)'

Above, we can see that in relation to Numerically Matching sets of parentheses, some of the individual Charges which represent opposing Family Groups display Mirroring between one another.

While the complete sets of Charges which are contained within the pairs of Numerically Matching parentheses each display a form of 'Cross Mirroring' between one another, as is shown below.

Addition: 'Reactive Charge(1 +/-,+/-,+)(2 +/-,+)(3 +)(4 +,+,-)(5 +,-,-)(6 -)(7 -,-,+/-)(8 -,+/-,+/-)(9 +/-)'  
 Subtraction: 'Reactive Charge(1 -,+/-,+/-)(2 -,-,+/-)(3 -)(4 +,-,-)(5 +,+,-)(6 +)(7 +/-,+)(8 +/-,+)(9 +/-)'

Above, we can see that each of the individual pairs of Numerically Matching parentheses displays 'Cross Mirroring' between one another.

Also, the complete sets of Charges which are contained within the pairs of parentheses of orientationally Mirrored Siblings display Matching between one another, as is shown below.

Addition: 'Reactive Charge(1 +/-,+/-,+)(2 +/-,+)(3 +)(4 +,+,-)(5 +,-,-)(6 -)(7 -,-,+/-)(8 -,+/-,+/-)(9 +/-)'  
 Subtraction: 'Reactive Charge(1 -,+/-,+/-)(2 -,-,+/-)(3 -)(4 +,-,-)(5 +,+,-)(6 +)(7 +/-,+)(8 +/-,+)(9 +/-)'

Above, we can see that the complete sets of Charges which are contained within the pairs of parentheses of orientationally Mirrored Siblings display a form of 'Cross Matching' between one another, in that set of parentheses of the topmost 1 displays Matching in relation to that of the bottommost 8 (both of which are highlighted arbitrarily in green), the set of parentheses of the bottommost 1 displays Matching in relation to that of the topmost 8 (both of which are highlighted arbitrarily in red), etc. .

Next, we will examine the various forms of Mirroring which are displayed by the 'Reactive Charges' which are possessed by each of the '(X / /) Sibling Complete Functions', starting with the 'Family Group Mirroring' which is displayed by the 'Reactive Charge' which is possessed by the 'Complete Multiplication Function', which is explained below.

In relation to the members of the '1,4,7 Family Group', the set of parentheses of the 'Self-Cousin 1' displays 'Perfect Matching' in relation to itself, while the sets of parentheses of the '4/7 Cousins' display 'Perfect Mirroring' between one another, as is shown below.

<p><b>'Perfect Matching'</b> (1 +/-)</p>	<p><b>'Perfect Mirroring'</b> (4 +,-,+/-) (7 -,+,+/-)</p>
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Above, we can see that the sets of parentheses of the '4/7 Cousins' display 'Perfect Mirroring' between one another, while the set of parentheses of the 'Self-Cousin 1' displays 'Perfect Matching' in relation to itself (in that the 1 is a 'Self-Cousin' which in this case involves a 'Neutral Charge'). (The example which is seen above involves the Mirroring and Matching which is displayed between individual Charges. Though the examples which involve the members of the 2,5,8 and 3,6,9 Family Groups involve the Mirroring or Matching which is displayed between groups of three Charges, as will be explained in a moment.)

While in relation to the members of the '2,5,8 Family Group', the sets of parentheses of the '2/5 Cousins' display 'Cross Matching' between one another, while the set of parentheses of the 'Self-Cousin 8' displays a Weak form of 'Self-Mirroring' (which also involves an instance of 'Self-Matching'), all of which is shown below.

<p><b>'Cross Matching'</b> (2 +/-,+,-, +,-,+/-, +,-,+/-) (5 +,-,+/-, +/-,+,-, +,-,+/-)</p>	<p><b>'Self-Mirroring'</b> (8 -,+/-,+,-,+/-,+,-,+,-,+/-)</p>
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Above, we can see that the sets of parentheses of the '2/5 Cousins' display a form of 'Cross Matching' between one another (with the three pairs of Matching groups of Charges highlighted arbitrarily in green, red, and blue), while the set of parentheses of the 'Self-Cousin 8' displays a form of 'Weak Mirroring' between its third group of Charges (which is highlighted arbitrarily in red) and its first two Matching groups of Charges (both of which are highlighted arbitrarily in brown). Also, we can see above that the red "+,-,+/-" group which is contained within the parentheses of the 8 displays Matching in relation to those which are contained within the parentheses of the 2 and the 5 (where they are highlighted in both red and blue), while the two brown "-,+/-,+" groups are unique to the set of parentheses of the 8, and the two green "+/-,+,-" groups are unique to the sets of parentheses of the '2/5 Cousins'.

Furthermore, in relation to the members of the '3,6,9 Family Group', the sets of parentheses of the '3/6 Sibling/Cousins' display a form of 'Cross Matching' between one another, while the set of parentheses of the 'Self-Sibling/Cousin 9' displays a form of 'Perfect Mirroring' in relation to itself, as is shown below.

<p><b>'Cross Matching'</b> (3 +/-,-,+ +,+/-,-, -,+,-,+/-) (6 +,+/-,-, +/-,-,+,-, -,+,-,+/-)</p>	<p><b>'Self-Mirroring'</b> (9 -,+,-,+/-)</p>
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Above, we can see that the sets of parentheses of the '3/6 Sibling/Cousins' display 'Cross Matching' between one another, with the three instances of Matching highlighted arbitrarily in green, red, and blue. While we can also see above that the set of parentheses of the 'Self-Sibling/Cousin 9' displays a

simple form of 'Perfect Mirroring' in relation to itself (in that the 9 is a 'Self-Sibling/Cousin' which in this case involves one instance of each of the three Charges), which is highlighted arbitrarily in brown.

Next, we will examine the 'Family Group Mirroring' which is displayed by the 'Reactive Charge' which is possessed by the 'Complete Division Function', which is explained below.

In relation to the members of the '1,4,7 Family Group', the set of parentheses of the 'Self-Cousin 1' displays 'Perfect Matching' in relation to itself (in that it contains a lone "+/-"), though due to the currently Invalid 'Collective /7 Division Function', we cannot determine if there is any Mirroring or Matching displayed between the sets of parentheses of the '4/7 Cousins'.

While in relation to the members of the '2,5,8 Family Group', the sets of parentheses of the '2/5 Cousins' display 'Cross Matching' between their groups of three Charges, as is shown below (with the Matching groups of Charges all highlighted in arbitrary colors).

**'Cross Matching'**  
 (2 +, -, +/-, +/ -, +, -, +, -, +/-)  
 (5 +/-, +, -, +, -, +/-, +, -, +/-)

Furthermore, the set of parentheses of the 'Self-Cousin 8' displays a Weak form of 'Self-Mirroring' which completes the overall form of 'Weak Mirroring' which is displayed between the sets of parentheses of the '2,5,8 Family Group' members, as is shown below.

**'Weak Mirroring'**  
 (2 +, -, +/-, +/ -, +, -, +, -, +/-)  
 (5 +/-, +, -, +, -, +/-, +, -, +/-)  
 (8 -, +/-, +, -, +/-, +, -, +, -, +/-)

The example which is seen above involves three groups of Charges (these being "+, -, +/-", "+/ -, +, -", and "-, +/-, +"), with these three groups of Charges displaying Matching in relation to those which are contained within the '2,5,8 Family Group' member sets of parentheses of the 'Complete Multiplication Function'.

Though due to the 'Collective /3 Division Function', the 'Collective /6 Division Function', and the 'Collective /9 Division Function' (all of which are currently Invalid), we will not be able to examine any of the Mirroring or Matching which may (or may not) be displayed between the '3,6,9 Family Group' member sets of parentheses of the 'Complete Division Function'. (Again, all of the individual 'Invalid Functions' will be solved in "Chapter Eight: Solving the Invalid Functions".)

The various forms of Mirroring which are displayed between the sets of parentheses of the Color and Reactive Charges which are possessed by the four 'Complete Functions' all arise due to various forms of Mirroring which are displayed between the various 'Collective Functions', all of which have been examined in previous chapters.