## Quantum Mathematics and the Standard Model of Physics Part Seven: <br> "Mirroring between Collective Functions"

In this Standard Model of Physics themed chapter, we will examine the various forms of Mirroring and/or Matching which are displayed between (mostly) Related 'Collective Functions'. (To clarify, the 'Collective Functions' which we will be examining will for the most part be Related through Number and/or Function.) In order to examine these forms of Mirroring, we will utilize the 'Collective Functions' which were first seen in "Quantum Mathematics and the Standard Model of Physics Part Four: 'Examining the Four Functions' ". As has been seen in previous chapters, when we compare the various Related 'Collective Functions' to one another (these being the '(+/-) Sibling Collective Functions', the '(X / /) Sibling Collective Functions', '(+/X) Cousin Collective Functions', and the '(- / /) Cousin Collective Functions'), we find that they display Mirroring and/or Matching between one another in a variety of manners, the specifics of which will be examined throughout this chapter. In this chapter, we will identify specific forms of Mirroring, using terms such as 'Inverted Mirroring', 'Shifted Mirroring', 'Twisted Mirroring', and "Shuffled Mirroring"(or some combination thereof), with all of these various forms of Mirroring being determined through the alteration of one of the two 'Collective Functions' which is being compared. (Throughout these examples, the alterations will all be to the second of the two Collective Functions', with this choice of 'Collective Function' being completely arbitrary.) This means that if two 'Collective Functions' are displaying Mirroring between one another, then altering (Inverting, Shifting, Twisting, and/or Shuffling) one of the 'Collective Functions' will yield Matching in relation to the other 'Collective Function', and the specifics of this alteration will allow us to determine the specific form of Mirroring which is being displayed between those two 'Collective Functions'.

We will start by examining the various 'Collective Functions' of the ' $1 / 8$ Sibling/Self-Cousins', starting with the '1/8 Sibling/Self-Cousin (X / /) Sibling Collective Functions', which are shown below.

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'Collective X1 Multiplication Function'
    \(1 \mathrm{X} 1=\) same (0) to 1 (No Change)
    \(2 \mathrm{X} 1=\) same (0) to 2 (No Change)
    \(3 \mathrm{X} 1=\) same (0) to 3 (No Change)
    \(4 \mathrm{X} 1=\) same (0) to 4 (No Change)
    \(5 \mathrm{X} 1=\) same (0) to 5 (No Change)
    \(6 \mathrm{X} 1=\) same (0) to 6 (No Change)
    \(7 \mathrm{X} 1=\) same (0) to 7 (No Change)
    \(8 \mathrm{X} 1=\) same (0) to 8 (No Change)
    9X1=same (0) to 9 (No Change)
    'Collective /1 Division Function'
    \(1 / 1=\) same (0) to 1 (No Change)
    \(2 / 1=\) same (0) to 2 (No Change)
    \(3 / 1=\) same (0) to 3 (No Change)
    \(4 / 1=\) same (0) to 4 (No Change)
    \(5 / 1=\) same (0) to 5 (No Change)
    \(6 / 1=\) same (0) to 6 (No Change)
    \(7 / 1=\) same (0) to 7 (No Change)
    \(8 / 1=\) same (0) to 8 (No Change)
    \(9 / 1=\) same (0) to 9 (No Change)
'Collective X1 Multiplication Function' \(1 \mathrm{X} 1=\) same (0) to 1 (No Change) \(2 \mathrm{X} 1=\) same (0) to 2 (No Change) \(3 \mathrm{X} 1=\) same (0) to 3 (No Change) \(4 \mathrm{X} 1=\) same (0) to 4 (No Change) \(5 \mathrm{X} 1=\) same (0) to 5 (No Change) \(6 \mathrm{X} 1=\) same (0) to 6 (No Change) \(7 \mathrm{X} 1=\) same (0) to 7 (No Change) \(8 \mathrm{X} 1=\) same (0) to 8 (No Change) 9X1=same (0) to 9 (No Change)
'Collective /1 Division Function'
\(1 / 1=\) same (0) to 1 (No Change)
\(2 / 1=\) same (0) to 2 (No Change)
\(3 / 1=\) same (0) to 3 (No Change)
\(4 / 1=\) same (0) to 4 (No Change)
\(5 / 1=\) same (0) to 5 (No Change)
\(6 / 1=\) same (0) to 6 (No Change)
\(7 / 1=\) same (0) to 7 (No Change)
\(8 / 1=\) same (0) to 8 (No Change)
\(9 / 1=\) same (0) to 9 (No Change)
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'Sibling Mirroring' (products 1/8 Siblings) (products $2 / 7$ Siblings) (products 3/6 Siblings) (products $4 / 5$ Siblings) (products 5/4 Siblings) (products 6/3 Siblings) (products $7 / 2$ Siblings) (products 8/1 Siblings) (products 9/9 Siblings)
'Sibling Mirroring' (quotients $1 / 8$ Siblings) (quotients 2/7 Siblings) (quotients 3/6 Siblings) (quotients $4 / 5$ Siblings) (quotients 5/4 Siblings) (quotients 6/3 Siblings) (quotients 7/2 Siblings) (quotients 8/1 Siblings) (quotients 9/9 Siblings)
'Collective X8 Multiplication Function' $1 \mathrm{X} 8=$ up (7) to 8 (Siblings) $2 \mathrm{X} 8=$ up (5) to 7 (Siblings) $3 X 8=$ up (3) to 6 (Siblings) $4 \mathrm{X} 8=$ up (1) to 5 (Siblings) $5 \mathrm{X} 8=$ down (1) to 4 (Siblings) $6 \mathrm{X} 8=$ down (3) to 3 (Siblings) $7 \mathrm{X8}=$ down (5) to 2 (Siblings) $8 \mathrm{X} 8=$ down (7) to 1 (Siblings) $9 \mathrm{X} 8=$ same (0) to 9 (No Change)
'Collective /8 Division Function'
$1 / 8=$ up (7) to 8 (Siblings) $2 / 8=$ up (5) to 7 (Siblings) $3 / 8=$ up (3) to 6 (Siblings) $4 / 8=$ up (1) to 5 (Siblings) $5 / 8=$ down (1) to 4 (Siblings) $6 / 8=$ down (3) to 3 (Siblings) $7 / 8=$ down (5) to 2 (Siblings) $8 / 8=$ down (7) to 1 (Siblings) $9 / 8=$ same (0) to 9 (No Change)

Above, we can see that the '1/8 Sibling/Self-Cousin (X / /) Sibling Collective Functions' display Matching between one another, as has been explained in previous chapters.

While if we examine either of these individual pairs of 'Collective Functions', we can see that they both display 'Sibling Mirroring' (between themselves), as has been explained previously. An example of this is shown below (in relation to the the ' $1 / 8$ Sibling/Self-Cousin Collective Multiplication Functions'), with all of the extraneous indicators removed from the individual Functions, and with the condensed products all highlighted arbitrarily in blue.

| 'Collective X1 Multiplication Function' | 'Sibling Mirroring' | 'Collective X8 Multiplication Function' |
| :---: | :---: | :---: |
| $1 \mathrm{X} 1=1$ | (products $1 / 8$ Siblings) | $1 \mathrm{X} 8=8$ |
| $2 \mathrm{X} 1=2$ | (products 2/7 Siblings) | $2 \mathrm{X} 8=7$ |
| $3 \mathrm{X} 1=3$ | (products 3/6 Siblings) | $3 \mathrm{X} 8=6$ |
| $4 \mathrm{X} 1=4$ | (products 4/5 Siblings) | $4 \mathrm{X} 8=5$ |
| $5 \mathrm{X} 1=5$ | (products 5/4 Siblings) | $5 \mathrm{X} 8=4$ |
| $6 \mathrm{X} 1=6$ | (products 6/3 Siblings) | $6 \mathrm{X} 8=3$ |
| $7 \mathrm{X} 1=7$ | (products 7/2 Siblings) | $7 \mathrm{X} 8=2$ |
| $8 \mathrm{X} 1=8$ | (products $8 / 1$ Siblings) | $8 \mathrm{X} 8=1$ |
| $9 \mathrm{X} 1=9$ | (products $9 / 9$ Siblings) | $9 \mathrm{X} 8=9$ |

Above, we can see that the '1/8 Sibling/Self-Cousin Collective Multiplication Functions' display a simple and previously established form of 'Sibling Mirroring' between one another, in that all of the horizontally aligned pairs of condensed products are Siblings of one another.

The 'Sibling Mirroring' which is displayed between the horizontally aligned condensed products of these two 'Collective Functions' indicates that the 'Collective X1 Multiplication Function' displays a form of 'Inverted And Shifted Mirroring' in relation to the 'Collective X8 Multiplication Function' (and vice versa), as is shown below.

| Ollective X1 Multiplication Function' | Matching | (Inverted and Shifted) <br> 'Collective X8 Multiplication Function' |
| :---: | :---: | :---: |
| (0X1=9) | (products 9/9 Match) | $9 \mathrm{X} 8=9$ |
| $1 \mathrm{X} 1=1$ | (products 1/1 Match) | $8 \mathrm{X8} 8=1$ |
| $2 \mathrm{X} 1=2$ | (products 2/2 Match) | $7 \mathrm{X} 8=2$ |
| $3 \mathrm{X} 1=3$ | (products 3/3 Match) | $6 \mathrm{X} 8=3$ |
| $4 \mathrm{X1}=4$ | (products 4/4 Match) | $5 \mathrm{X} 8=4$ |
| $5 \mathrm{X} 1=5$ | (products 5/5 Match) | $4 \mathrm{X} 8=5$ |
| $6 \mathrm{X} 1=6$ | (products 6/6 Match) | $3 \mathrm{X} 8=6$ |
| $7 \mathrm{X} 1=7$ | (products 7/7 Match) | $2 \mathrm{X} 8=7$ |
| $8 \mathrm{X} 1=8$ | (products 8/8 Match) | $1 \mathrm{X} 8=8$ |
| $9 \mathrm{X1}=9$ | (products 9/9 Match) | (0X8=9) |

Above, we can see that Inverting the 'Collective X8 Multiplication Function' and setting it one step higher than the 'Collective X1 Multiplication Function' causes the '1/8 Sibling/Self-Cousin Collective Multiplication Functions' to display Matching between their horizontally aligned condensed products, which qualifies the form of Mirroring which the 'Collective X8 Multiplication Function' displays in relation to the 'Collective X1 Multiplication Function' as 'Inverted And Shifted (1) Mirroring', with the "(1)" which is contained within the descriptor indicating that the Shift is one step upwards. While in this example, we can see that the concentrically outermost pairs of horizontally aligned Functions involve two assumed 'X0 Multiplication Functions' (both of which are included in parentheses), with
these two 'X0 Multiplication Functions' both yielding condensed products of 9 which display Matching in relation to the condensed products which are yielded by the two individual 'X9 Multiplication Functions'. These two instances of Matching condensed 9's are being used as the endpoints of the 'Collective Functions', though upcoming examples will indicate that the Matching which is displayed between the horizontally aligned condensed solutions of these Related pairs of 'Collective Functions' will continue into multiple-digit factors, as well as 'Negative Base Charged' factors.

As was mentioned earlier, all of the alterations which will be seen in this chapter will be in relation to the second of the two 'Collective Functions', though this choice of 'Collective Function' is completely arbitrary. This means that technically, the 'Collective X1 Multiplication Function' can also be considered to display 'Inverted And Shifted (1) Mirroring' in relation to the 'Collective X8 Multiplication Function', as is shown below.
(Inverted and Shifted)
'Collective X1 Multiplication Function'
$9 \mathrm{X} 1=9$
$8 \mathrm{X} 1=8$
$7 \mathrm{X} 1=7$
$6 \mathrm{X} 1=6$
$5 \mathrm{X} 1=5$
$4 \mathrm{X} 1=4$
$3 \mathrm{X} 1=3$
$2 \mathrm{X} 1=2$
$1 \mathrm{X} 1=1$
$(0 \mathrm{X} 1=0)$

'Collective X8 Multiplication Function'
$(0 X 8=0)$
$1 X 8=8$
$2 X 8=7$
$3 X 8=6$
$4 X 8=5$
$5 X 8=4$
$6 X 8=3$
$7 X 8=2$
$8 X 8=1$
$9 X 8=9$

Above, we can see that Inverting the 'Collective X1 Multiplication Function' and setting it one step higher than the 'Collective X8 Multiplication Function' causes the '1/8 Sibling/Self-Cousin Collective Multiplication Functions' to display Matching between their horizontally aligned condensed products, which qualifies the form of Mirroring which the 'Collective X1 Multiplication Function' displays in relation to the 'Collective X8 Multiplication Function' as 'Inverted And Shifted (1) Mirroring'. (Again, throughout the remainder of this chapter, all of the alterations will be in relation to the second of the 'Collective Functions'.)

We have already determined that the ' $1 / 8$ Sibling/Self-Cousin Collective Division Functions' display Matching in relation to the '1/8 Sibling/Self-Cousin Collective Multiplication Functions', which means that there is no need for us to examine the '1/8 Sibling/Self-Cousin Collective Division Functions', as we already know that they will display a form of Mirroring between one another which displays Matching in relation to that which is displayed between the '1/8 Sibling/Self-Cousin Collective Multiplication Functions' (this being 'Inverted And Shifted (1) Mirroring').

Next, we will examine the '1/8 Sibling/Self-Cousin (+/-) Sibling Collective Functions', which are shown below (again, with everything removed from the individual Functions except for the condensed solutions). (In this example, most of the individual '-8 Subtraction Functions' yield 'Negative Base Charged' non-condensed differences, all of which have been switched to their 'Positive Base Charged' Sibling via 'Positive/Negative Sibling Mirroring', as has been the case throughout previous chapters, and as will also be the case throughout this chapter.)

| 'Collective $\mathbf{+ 1}$ Addition Function' | 'Collective $+\mathbf{8}$ Addition Function' |
| :---: | :---: |
| $1+1=2$ | $1+8=9$ |
| $2+1=3$ | $2+8=1$ |
| $3+1=4$ | $3+8=2$ |
| $4+1=5$ | $4+8=3$ |
| $5+1=6$ | $5+8=4$ |
| $6+1=7$ | $6+8=5$ |
| $7+1=8$ | $7+8=6$ |
| $8+1=9$ | $8+8=7$ |
| $9+1=1$ | $9+8=8$ |
| 'Collective -1 Subtraction Function' | 'Collective -8 Subtraction Function' |
| $1-1=0(9)$ | $1-8=2$ |
| $2-1=1$ | $2-8=3$ |
| $3-1=2$ | $3-8=4$ |
| $4-1=3$ | $4-8=5$ |
| $5-1=4$ | $5-8=6$ |
| $6-1=5$ | $6-8=7$ |
| $7-1=6$ | $7-8=8$ |
| $8-1=7$ | $8-8=9$ |
| $9-1=8$ | $9-8=1$ |

Above, we can see that the '1/8 Sibling/Self-Cousin (+/-) Sibling Collective Functions' display an overall form of Mirroring between one another, in that the rightmost of the top pair of 'Collective Functions' involves condensed solutions which display Matching in relation to those which are yielded by the leftmost of the bottom pair of 'Collective Functions', and the leftmost of the top pair of 'Collective Functions' involves condensed solutions which display Matching in relation to those which are yielded by the rightmost of the bottom pair of 'Collective Functions'. This means that the '1/8 Sibling/Self-Cousin (+/-) Sibling Collective Functions' display 'Twisted Mirroring' between one another, as is shown below.

## 'Collective +1 Addition Function' <br> $1+1=2$ <br> $2+1=3$ <br> $3+1=4$ <br> $4+1=5$ <br> $5+1=6$ <br> $6+1=7$ <br> $8+1=9$ <br> $9+1=1$

$7+1=8 \quad 7+8=6$
(Twisted) 'Collective -8 Subtraction Function'
$1-8=2$
$2-8=3$
$3-8=4$
$4-8=5$
$5-8=6$
$6-8=7$
$7-8=8$
$8-8=9$
$9-8=1$
'Collective +8 Addition Function'
$1+8=9$
$2+8=1$
$3+8=2$
$4+8=3$
$5+8=4$
$6+8=5$
$8+8=7$
$9+8=8$
(Twisted) 'Collective -1 Subtraction Function'
$1-1=9$
$2-1=1$
$3-1=2$
$4-1=3$
$5-1=4$
$6-1=5$
$7-1=6$
$8-1=7$
$9-1=8$

Above, we can see that Twisting the bottommost pair of 'Collective Functions' yields Matching between the condensed solutions of the vertically aligned pairs of 'Collective Functions', which means that the '1/8 Sibling/Self-Cousin (+/-) Sibling Collective Functions' display 'Twisted Mirroring' between one another, in that Twisting either of the pairs of 'Collective Functions' will yield Matching between their vertically aligned condensed products, with this vertical form of Matching being highlighted above in arbitrary red and green. (Throughout this chapter, in relation to these instances of 'Twisted Mirroring', the Twist will always be applied to the bottommost of the pairs of 'Collective Functions', with this choice of 'Collective Function' pair being completely arbitrary.)

Also, when two of the individual Functions which are contained within the 'Collective +8 Addition Function' are Shifted from the bottom of the 'Collective Function' upwards to the top, the '1/8 Sibling/Self-Cousin Collective Addition Functions' display Matching between their horizontally aligned condensed sums, which means that the '1/8 Sibling/Self-Cousin Collective Addition Functions' display a form of 'Shifted Mirroring' between one another, as is shown below. (To clarify, this is simply an alternate method of indicating the specific form of 'Shifted Mirroring' which is displayed between a pair of 'Collective Functions', one which will be used whenever the Shifted 'Collective Function' does not involve an Inversion.)
'Collective $+\mathbf{1}$ Addition Function'
$1+1=2$
$2+1=3$
$3+1=4$
$4+1=5$
$5+1=6$
$6+1=7$
$7+1=8$
$8+1=9$
$9+1=1$

Matching
(sums 2/2 Match)
(sums 3/3 Match)
(sums 4/4 Match)
(sums 5/5 Match)
(sums 6/6 Match)
(sums 7/7 Match)
(sums 8/8 Match)
(sums 9/9 Match)
(sums 1/1 Match)
(Shifted) 'Collective +8 Addition Function'
$3+8=2$
$4+8=3$
$5+8=4$
$6+8=5$
$7+8=6$
$8+8=7$
$9+8=8$
$1+8=9$
$2+8=1$

Above, we can see that Shifting the first two of the individual Functions which are contained within the 'Collective +8 Addition Function' from the top to the bottom yields Matching between the horizontally aligned condensed sums of the '1/8 Sibling/Self-Cousin Collective Addition Functions' (with the two Shifted Functions highlighted arbitrarily in red, and the condensed sums all highlighted arbitrarily in blue). This means that the 'Collective +8 Addition Function' displays 'Shifted (2) Mirroring' in relation to the 'Collective +1 Addition Function', in that even though the two individual Functions which are Shifted within the 'Collective +8 Addition Function' are Shifted downwards, this downward Shift causes the overall 'Collective +8 Addition Function' to re-align two steps upward. (It is for this reason that the "(2)" which is contained within the descriptor is highlighted in green.) In this example, in order to achieve the appropriate Matching between the condensed sums, the individual Shifted Functions have been physically Shifted down to the bottom of the 'Collective Function', with this being the standard method which we will be using to indicate instances of 'Shifted Mirroring' throughout this chapter (unless the instance of 'Shifted Mirroring' also involves an Inversion, as was mentioned a moment ago). (The alternate method which can be used to indicate this form of 'Shifted Mirroring' will be explained in a moment.)

While the '1/8 Sibling/Self-Cousin Collective Subtraction Functions' display a Mirrored variation on this behavior, as is shown below.
'Collective -1 Subtraction Function'
$1-1=0$
$2-1=1$
$3-1=2$
$4-1=3$
$5-1=4$
$6-1=5$
$7-1=6$
$8-1=7$
$9-1=8$

Matching
(differences 0/0 Match)
(differences $1 / 1$ Match)
(differences 2/2 Match)
(differences 3/3 Match)
(differences 4/4 Match)
(differences 5/5 Match)
(differences 6/6 Match)
(differences 7/7 Match)
(differences $8 / 8$ Match)
(Shifted) 'Collective -8 Subtraction Function'

$$
8-8=0
$$

$$
9-8=1
$$

$1-8=2$
$2-8=3$
$3-8=4$
$4-8=5$
$5-8=6$
$6-8=7$
$7-8=8$

Above, we can see that Shifting the bottommost two of the individual Functions which are contained within the 'Collective - 8 Subtraction Function' from the top to the bottom yields Matching between the horizontally aligned condensed differences of the '1/8 Sibling/Self-Cousin Collective Subtraction Functions', which means that the 'Collective -8 Subtraction Function' displays 'Shifted (2) Mirroring' in relation to the 'Collective -8 Subtraction Function'. (In this case, the "(2)" which is contained within the descriptor is highlighted in red, in order to indicate the downward Shift in the overall 'Collective -8 Subtraction Function'.)

Next is the aforementioned alternate method which can be used to indicate these forms of 'Shifted Mirroring', which is shown below (in relation to the '1/8 Sibling/Self-Cousin Collective Addition Functions').
'Collective $\mathbf{+ 1}$ Addition Function'
$(-2+1=8)$
$(-1+1=9)$
$0+1=1$
$1+1=2$
$2+1=3$
$3+1=4$
$4+1=5$
$5+1=6$
$6+1=7$
$7+1=8$
$8+1=9$
$9+1=1$

| Matching | (Shifted) 'Collective $\mathbf{+ 8}$ Addition Function' |
| :--- | :---: |
| (sums $8 / 8$ Match) | $0+8=8$ |
| (sums $9 / 9$ Match) | $1+8=9$ |
| (sums 1/1 Match) | $2+8=1$ |
| (sums 2/2 Match) | $3+8=2$ |
| (sums 3/3 Match) | $4+8=3$ |
| (sums 4/4 Match) | $5+8=4$ |
| (sums 5/5 Match) | $6+8=5$ |
| (sums 6/6 Match) | $7+8=6$ |
| (sums 7/7 Match) | $8+8=7$ |
| (sums 8/8 Match) | $9+8=8$ |
| (sums 9/9 Match) | $(10+8=9)$ |
| (sums 1/1 Match) | $(11+8=1)$ |

Above, we can see that the 'Shifted (2) Mirroring' which the 'Collective +8 Addition Function' displays in relation to the 'Collective +1 Addition Function' can also be indicated by continuing the addends of the 'Collective +1 Addition Function' into 'Negative Base Charged Numbers' (and eventually multipledigit Numbers) and the addends of the 'Collective +8 Addition Function' into multiple-digit Numbers (and eventually 'Negative Base Charged Numbers'), all of which is shown above (with the Functions which involve multiple-digit and 'Negative Base Charged' addends all shown in parentheses). (The Matching which is displayed between the horizontally aligned condensed sums of these two 'Collective Functions' will continue on to Infinity.) This is a valid method of indicating this (or any) form of 'Shifted Mirroring', though for simplicity, we will be using the standard method on the instances of non-Inverted 'Collective Functions' which display 'Shifted Mirroring' between one another throughout
the rest of this chapter (with the standard method involving individual Shifted Functions, as was explained a moment ago).

To recap, the forms of Mirroring which were examined in this section (those which are displayed between the Related 'Collective Functions' of the '1/8 Sibling/Self-Cousins') are as follows. The '1/8 Sibling/Self-Cousin Collective Multiplication Functions' display 'Inverted And Shifted (1) Mirroring' between one another, as do the '1/8 Sibling/Self-Cousin Collective Division Functions' (with these two pairs of 'Collective Functions' displaying Matching between one another). While the '1/8 Sibling/SelfCousin Collective Addition Functions' display 'Shifted (2) Mirroring' between one another, and the '1/8 Sibling/Self-Cousin Collective Subtraction Functions' display 'Shifted (2) Mirroring' between one another (while the '1/8 Sibling/Self-Cousin Collective Addition Functions' and the '1/8 Sibling/SelfCousin Collective Subtraction Functions' display 'Twisted Mirroring' between one another).

These two Numbers (the 1 and the 8) are unique in the specific forms of Mirroring and Matching which are displayed between their 'Collective Functions', which is due to their unique Relationship as Sibling/Self-Cousins. Throughout this chapter, we will see how the various 'Direct Relationships' which exist between the Numbers influence the manner in which the Related or Matching 'Collective Functions' of Related Numbers display Mirroring and/or Matching between one another. (To clarify, all of the 'Direct Relationships' which exist in relation to the 1 and the 8 are contained within this Sibling/Self-Cousin pairing. The 1 shares a Family Group with the 4 and the 7 , and the 8 shares a Family Group with the 2 and the 5, though these Relationships are all 'Indirect Relationships', as only Siblings and Cousins are 'Directly Related', as was explained in "Chapter Four".)

Next is a list of the various forms of Mirroring and/or Matching which are displayed between the Related and non-Related 'Collective Functions' of the '1/8 Sibling/Self-Cousins', which is shown below (through the page break).

## 'Sibling Collective Functions'

"X1" - "/1" Matching
"X1" - "/8" 'Inverted And Shifted (1) Mirroring'
"/1" - "X8" 'Inverted And Shifted (1) Mirroring'
"/8" - "X8" Matching
"+1" - "-8" Matching
"+1" - "-1" 'Shifted (2) Mirroring'
"+8" - "-8" 'Shifted (2) Mirroring'
"+8" - "-1" Matching
'Cousin Collective Functions'
"X1" - "+1" 'Inverted And Shifted (1) Mirroring'
"X1" - "+8" 'Inverted And Shifted (1) Mirroring'
"/1" - "-1" 'Shifted (1) Mirroring'
"/1" - "-8" 'Shifted (1) Mirroring'
Matching 'Collective Functions'
"X1" - "X8" 'Inverted And Shifted (1) Mirroring'
"/1" - "/8" 'Inverted And Shifted (1) Mirroring'
"+1" - "+8" 'Shifted (2) Mirroring'
"-1" - "-8" 'Shifted (2) Mirroring'

# non-Related 'Collective Functions' 

"X1" - "-1" 'Inverted And Shifted (1) Mirroring'
"X1" - "-8" 'Inverted And Shifted (1) Mirroring'
"/1" - "+1" 'Shifted (1) Mirroring'
"/1" - "+8" 'Shifted (1) Mirroring'

That completes our examination of the instances of Mirroring and/or Matching which are displayed between the various instances of Related and non-Related 'Collective Functions' of the '1/8 Sibling/Self-Cousins'.

In this section, we will examine the 'Collective Functions' of another pair of unique Sibling/Cousins, these being the ' $3 / 6$ Sibling/Cousins'. Though before we begin, it should be noted that the ' $/ 3$ Division Function' and the '/6 Division Function' are both 'Invalid Functions', in that they yield quotients which (for the most part) involve 'Infinitely Repeating Decimal Numbers', which means that they would be of no immediate use to us here. Therefore, throughout this chapter, we will not be working with the 'Collective / 3 Division Function' or the 'Collective /6 Division Function' (nor will we be working with the 'Collective /7 Division Function'). (Again, the individual 'Invalid Functions' will all be Validated in "Chapter Eight: 'Validating the Invalid Functions' ".)

We will start by examining the '3/6 Sibling/Cousin Collective Multiplication Functions', which are shown below.

| 'Collective X3 Multiplication Function' | Mirroring | 'Collective X6 Multiplication Function' |
| :---: | :---: | :---: |
| $1 \mathrm{X} 3=\mathrm{up}$ (2) to 3 | (2/5 Cousins, 3/6 Siblings) | 1X6=up (5) to 6 |
| $2 \mathrm{X} 3=$ up (4) to 6 | (4/1 Family Group, 6/3 Siblings) | 2X6=up (1) to 3 |
| $3 \mathrm{X} 3=$ up (6) to 9 | (Same Function) | $3 \mathrm{X} 6=$ up (6) to 9 |
| 4X3=down (1) to 3 | (3/6 Siblings*) | 4X6=up (2) to 6 |
| $5 \mathrm{X} 3=$ up (1) to 6 | (6/3 Siblings*) | 5X6=down (2) to 3 |
| $6 \mathrm{X} 3=$ up (3) to 9 | (Same Function) | 6X6=up (3) to 9 |
| $7 \mathrm{X3}=$ down (4) to 3 | (4/1 Family Group, 3/6 Siblings) | 7X6=down (1) to 6 |
| $8 \mathrm{X3}=$ down (2) to 6 | (2/5 Cousins, 6/3 Siblings) | 8X6=down (5) to 3 |
| $9 \mathrm{X3}=$ same (0) to 9 | (Same Function) | 9X6=same (0) to 9 |

Above, we can see the previously established forms of Mirroring and Matching which are displayed between the '3/6 Sibling/Cousin Collective Multiplication Functions'.

Next, we will examine these same 'Collective Functions', only with the 'Collective X6 Multiplication Function' Inverted and Shifted, as is shown below. (This time around, the values of change are included in the chart, as they also display forms of Mirroring between one another (where as in relation to the '1/8 Sibling/Self-Cousins', they did not).)

|  |  | (Inverted and Shifted) |
| :---: | :---: | :---: |
| 'Collective X3 Multiplication Function' | Mirroring | 'Collective X6 Multiplication Function' |
| (0X3=9) | (9/9 Match) | 9X6=same (0) to 9 |
| $1 \mathrm{X} 3=$ up (2) to 3 | (2/5 Cousins,3/3 Match) | 8X6=down (5) to 3 |
| $2 \mathrm{X} 3=$ up (4) to 6 | (4/1 Family Group,6/6 Match) | 7X6=down (1) to 6 |
| $3 \mathrm{X} 3=$ up (6) to 9 | (6/3 Siblings,9/9 Match) | 6X6=up (3) to 9 |
| 4X3=down (1) to 3 | (3/3 Match) | 5X6=down (2) to 3 |
| $5 \mathrm{X} 3=$ up (1) to 6 | (6/6 Match) | 4X6=up (2) to 6 |
| $6 \mathrm{X} 3=$ up (3) to 9 | (3/6 Siblings,9/9 Match) | 3X6=up (6) to 9 |
| $7 \mathrm{X3}=$ down (4) to 3 | (4/1 Family Group,3/3 Match) | 2X6=up (1) to 3 |
| $8 \mathrm{X3}=$ down (2) to 6 | (2/5 Cousins, $6 / 6$ Match) | 1X6=up (5) to 6 |
| $9 \mathrm{X3}=$ same (0) to 9 | (9/9 Match) | (0X6=9) |

Above, we can see that Inverting the 'Collective X6 Multiplication Function' and Shifting it upwards by one step yields Matching between the horizontally aligned condensed products of the '3/6 Sibling/Cousin Collective Multiplication Functions', which means that the 'Collective X6 Multiplication Function' displays 'Inverted And Shifted (1) Mirroring' in relation to the 'Collective X3 Multiplication Function'. (The '3/6 Sibling/Cousin Collective Multiplication Functions' display the same form of Mirroring between one another as the two pairs of '1/8 Sibling/Self-Cousin (X / /) Sibling Collective Functions' (individually), which implies that the currently Invalid ' $3 / 6$ Sibling/Cousin Collective Division Functions' would also display 'Inverted And Shifted (1) Mirroring' between one another, as will be confirmed in "Chapter Eight: 'Validating the Invalid Functions' ".) Also, there are various forms of 'Family Group Matching' displayed between the values of change of the concentric pairs of horizontally aligned Functions, all of which is indicated between the 'Collective Functions'. The outermost concentric pairs of Functions (excluding those which yield condensed products of 9) involve values of change which involve two instances of the '2/5 Cousins', while the two pairs of Functions which are oriented one concentric step inwards from there involve values of change which involve 4's and 1's (with these 4's and 1's being fellow Family Group members), and the two pairs of Functions which are oriented one concentric step inwards from there involve values of change which involve two instances of the '3/6 Sibling/Cousins' (with the pairings of $6 / 3$ and $3 / 6$ displaying orientational Mirroring between one another). (The concentric forms of 'Family Group Matching' which are displayed between the values of change of the ' $3 / 6$ Sibling/Cousin Collective Multiplication Functions' are not displayed in relation to the values of change of either of the pairs of the ' $1 / 8$ Sibling/Self-Cousin Collective Functions'.)

As was mentioned at the beginning of this section, the '3/6 Sibling/Cousin Collective Division Functions' involve a collection of individual 'Invalid Functions', which means that they would be of no immediate use to us. Therefore, we will move on to an examination of the '3/6 Sibling/Cousin (+/-) Sibling Collective Functions' (individually), starting with the '3/6 Sibling/Cousin Collective Addition Functions', which are shown below.

| 'Collective $+\mathbf{3}$ Addition Function' | 'Collective $+\mathbf{6}$ Addition Function' |
| :---: | :---: |
| $1+3=4$ | $1+6=7$ |
| $2+3=5$ | $2+6=8$ |
| $3+3=6$ | $3+6=9$ |
| $4+3=7$ | $4+6=1$ |
| $5+3=8$ | $5+6=2$ |
| $6+3=9$ | $6+6=3$ |
| $7+3=1$ | $7+6=4$ |
| $8+3=2$ | $8+6=5$ |
| $9+3=3$ | $9+6=6$ |

Above, we can see that in this ordered arrangement, the '3/6 Sibling/Cousin Collective Addition Functions' display various forms of Matching between their horizontally aligned condensed sums, all of which are highlighted in various arbitrary colors. (In this case, the instance of 'Sibling Matching' is highlighted in red, the instances of 'Cousin Matching' are both highlighted in green, and the instances of 'Family Group Matching' are all highlighted in purple.) These various forms of Matching are due to characteristics of the '3,6,9 Family Group' members, all of which have been explained in previous chapters. (These forms of Matching are irrelevant for our current purposes, and will therefore be disregarded going forward from here.)

Next, we will Shift the 'Collective +6 Addition Function' downwards by three steps, as is shown below.

```
'Collective +3 Addition Function
    1+3=4
    2+3=5
    3+3=6
    4+3=7
    5+3=8
    6+3=9
    7+3=1
    8+3=2
    9+3=3
```


## Matching

(sums 4/4 Match)
(sums 5/5 Match)
(sums 6/6 Match)
(sums 7/7 Match)
(sums 8/8 Match)
(sums 9/9 Match)
(sums 1/1 Match)
(sums 2/2 Match)
(sums 3/3 Match)
(Shifted) 'Collective +6 Addition Function'
$7+6=4$
$8+6=5$
$9+6=6$
$1+6=7$
$2+6=8$
$3+6=9$
$4+6=1$
$5+6=2$
$6+6=3$

Above, we can see that Shifting the bottommost three of the individual Functions which are contained within the 'Collective +6 Addition Function' from the bottom to the top yields Matching between the horizontally aligned condensed sums of the '3/6 Sibling/Cousin Collective Addition Functions', which means that the 'Collective +6 Addition Function' displays 'Shifted (3) Mirroring' in relation to the 'Collective +3 Addition Function'.

While the '3/6 Sibling/Cousin Collective Subtraction Functions' display a Mirrored variation on this behavior, as is shown below.

| 'Collective -3 Subtraction Function' | Matching | (Shifted) 'Collective $-\mathbf{6}$ Subtraction Function' |
| :---: | :---: | :---: |
| $1-3=7$ | (differences 7/7 Match) | $4-6=7$ |
| $2-3=8$ | (differences $8 / 8$ Match) | $5-6=8$ |
| $3-3=9$ | (differences 9/9 Match) | $6-6=9$ |
| $4-3=1$ | (differences $1 / 1$ Match) | $7-6=1$ |
| $5-3=2$ | (differences $2 / 2$ Match) | $8-6=2$ |
| $6-3=3$ | (differences 3/3 Match) | $9-6=3$ |
| $7-3=4$ | (differences 4/4 Match) | $1-6=4$ |
| $8-3=5$ | (differences 5/5 Match) | $2-6=5$ |
| $9-3=6$ | (differences $6 / 6$ Match) | $3-6=6$ |

Above, we can see that Shifting the topmost three of the individual Functions which are contained within the 'Collective -6 Subtraction Function' from the top to the bottom yields Matching between the horizontally aligned condensed differences of the ' $3 / 6$ Sibling/Cousin Collective Subtraction Functions', which means that the 'Collective -6 Subtraction Function' displays 'Shifted (3) Mirroring' in relation to the 'Collective -3 Subtraction Function'.

Next, we can determine that the '3/6 Sibling/Cousin (+/-) Sibling Collective Functions' display 'Twisted Mirroring' between one another, as is shown below.
'Collective $+\mathbf{3}$ Addition Function'
$1+3=4$
$2+3=5$
$3+3=6$
$4+3=7$
$5+3=8$
$6+3=9$
$7+3=1$
$8+3=2$
$9+3=3$
(Twisted) 'Collective -6 Subtraction Function'
$1-6=4$
$2-6=5$
$3-6=6$
$4-6=7$
$5-6=8$
$6-6=9$
$7-6=1$
$8-6=2$
$9-6=3$

## 'Collective +6 Addition Function'

$1+6=7$
$2+6=8$
$3+6=9$
$4+6=1$
$5+6=2$
$6+6=3$
$7+6=4$
$8+6=5$
$9+6=6$
(Twisted) 'Collective -3 Subtraction Function'
$1-3=7$
$2-3=8$
3-3=9
$4-3=1$
$5-3=2$
$6-3=3$
$7-3=4$
$8-3=5$
$9-3=6$

Above, we can see that Twisting the bottommost pair of 'Collective Functions' yields Matching between the condensed solutions of the vertically aligned 'Collective Functions', which means that the '3/6 Sibling/Cousin (+/-) Sibling Collective Functions' display 'Twisted Mirroring' between one another, in that Twisting either of the pairs of 'Collective Functions' will yield Matching between their vertically aligned condensed solutions, with this vertical form of Matching highlighted above in arbitrary red and green.

To recap, the forms of Mirroring which were examined in this section (those which are displayed between the Related (and Valid) 'Collective Functions' of the '3/6 Sibling/Cousins') are as follows. The '3/6 Sibling/Cousin Collective Addition Functions' display 'Shifted (3) Mirroring' between one another, and the '3/6 Sibling/Cousin Collective Subtraction Functions' display 'Shifted (3) Mirroring' between one another. (While the ' $3 / 6$ Sibling/Cousin (+/-) Sibling Collective Functions' display 'Twisted Mirroring' between one another.) Also, the ' $3 / 6$ Sibling/Cousin Collective Multiplication Functions' display 'Inverted And Shifted (1) Mirroring' between one another, while we would assume that the currently Invalid '3/6 Sibling/Cousin Collective Division Functions' would also display 'Inverted And Shifted (1) Mirroring' between one another (as will be confirmed in "Chapter Eight: 'Validating the Invalid Functions' "). (All of these various forms of Mirroring will be listed in a moment.)

These two Numbers (the 3 and the 6) are unique in the specific forms of Mirroring and Matching which are displayed between their 'Collective Functions', which is due to their unique Relationship as Sibling/Cousins, in that all of the 'Direct Relationships' which exist in relation to the 3 and the 6 are contained within this Sibling/Cousin pairing (as was the case in relation to the '1/8 Sibling/SelfCousins').

Next is a list of the various forms of Mirroring and Matching which are displayed between the Related and non-Related 'Collective Functions' of the '3/6 Sibling/Cousins', which is shown below (excluding the 'Collective /3 Division Function' and the 'Collective /6 Division Function', both of which are currently Invalid).

'Sibling Collective Functions'<br>"+3" - "-6" Matching<br>"+3" - "-3" 'Shifted (3) Mirroring'<br>"+6" - "-6" 'Shifted (3) Mirroring'<br>"+6" - "-3" Matching<br>\section*{'Cousin Collective Functions'}<br>"X6" - "+3" No Mirror or Matching<br>"X6" - "+6" No Mirror or Matching<br>"X3" - "+3" No Mirror or Matching<br>"X3" - "+6" No Mirror or Matching<br>Matching 'Collective Functions'<br>"X6" - "X3" 'Inverted And Shifted (1) Mirroring'<br>"+3" - "+6" 'Shifted (3) Mirroring'<br>"-3" - "-6" 'Shifted (3) Mirroring'<br>non-Related 'Collective Functions'<br>"X3" - "-3" No Mirror or Matching<br>"X3" - "-6" No Mirror or Matching<br>"X6" - "-3" No Mirror or Matching<br>"X6" - "-6" No Mirror or Matching

That completes our examination of the instances of Mirroring and/or Matching which are displayed between the various instances of Related (and non-Related) 'Collective Functions' of the '3/6 Sibling/Cousins'.

In this section, we will examine the 'Collective Functions' of the first of the two traditional pairs of Siblings, this being the ' $2 / 7$ Siblings'. Though before we begin, it should be noted that the ' $/ 7$ Division Function' is an 'Invalid Function', which means that we will not have a Valid 'Collective $/ 7$ Division Function' to work with here. Therefore we will not be able to examine the ' $2 / 7$ Sibling Collective Division Functions' in this section (nor will we be able to examine the '2/7 Sibling (X / /) Sibling Collective Functions' in relation to one another).

We will start by examining the '2/7 Sibling Collective Multiplication Functions', which are shown below.

| 'Collective X2 Multiplication Function' | 'Sibling Mirroring' | 'Collective X7 Multiplication Function' |
| :---: | :---: | :---: |
| $1 \mathrm{X} 2=2$ | (products 2/7 Siblings) | $1 \mathrm{X} 7=7$ |
| $2 \mathrm{X} 2=4$ | (products 4/5 Siblings) | $2 \mathrm{X7}=5$ |
| 3X2=6 | (products 6/3 Siblings) | $3 \mathrm{X} 7=3$ |
| $4 \mathrm{X} 2=8$ | (products 8/1 Siblings) | $4 \mathrm{X} 7=1$ |
| $5 \mathrm{X} 2=1$ | (products 1/8 Siblings) | $5 \mathrm{X} 7=8$ |
| 6X2=3 | (products 3/6 Siblings) | $6 \mathrm{X7}=6$ |
| $7 \mathrm{X} 2=5$ | (products 5/4 Siblings) | $7 \mathrm{X7}=4$ |
| $8 \mathrm{X} 2=7$ | (products 7/2 Siblings) | $8 \mathrm{X7}=2$ |
| 9X2=9 | (products 9/9 Siblings) | 9X7 $=9$ |

Above, we can see that the ' $2 / 7$ Sibling Collective Multiplication Functions' display a simple and previously established form of 'Sibling Mirroring' between one another, in that all of the horizontally aligned pairs of condensed products are Siblings of one another.

Next, we will Invert the 'Collective X7 Multiplication Function' and Shift it upwards by one step, as is shown below.
(Inverted and Shifted)
'Collective X2 Multiplication Function'
(0X2=9)
1X2=2
$2 \mathrm{X} 2=4$
$3 \mathrm{X} 2=6$
4X2=8
$5 \mathrm{X} 2=1$
$6 \mathrm{X} 2=3$
7X2=5
$8 \mathrm{X} 2=7$
9X2=9

Matching
(products 9/9 Match)
(products 2/2 Match)
(products 4/4 Match)
(products 6/6 Match)
(products 8/8 Match)
(products 1/1 Match)
(products 3/3 Match)
(products 5/5 Match)
(products 7/7 Match)
(products 9/9 Match)
'Collective X7 Multiplication Function' 9X7=9
8X7=2
$7 \mathrm{X} 7=4$
$6 \mathrm{X7}=6$
$5 \times 7=8$
4X7=1
3X7=3
$2 \mathrm{X7}=5$
1X7=7
(0X7=9)

Above, we can see that Inverting the 'Collective X7 Multiplication Function' and Shifting it upwards by one step yields Matching between the horizontally aligned condensed products of the '2/7 Sibling Collective Multiplication Functions', which means that the 'Collective X7 Multiplication Function' displays 'Inverted And Shifted (1) Mirroring' in relation to the 'Collective X2 Multiplication Function'.

Next, we will examine the '2/7 Sibling (+/-) Sibling Collective Functions' (individually), starting with the '2/7 Sibling Collective Addition Functions', which are shown below.

## 'Collective +2 Addition Function'

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

$$
7+2=9
$$

$$
8+2=1
$$

$$
9+2=2
$$

'Collective +7 Addition Function'
$1+7=8$
$2+7=9$
$3+7=1$
$4+7=2$
$5+7=3$
$6+7=4$
$7+7=5$
$8+7=6$
$9+7=7$


#### Abstract

Above, we can see that the '2/7 Sibling Collective Addition Functions' do not display any instances of Mirroring or Matching between their horizontally aligned condensed sums. (This example involves the instance of 'Sibling Mirroring' which is displayed between the condensed sums of the ' +9 Addition Functions', as will be the case in relation to a few of the upcoming examples. Though this form of 'Sibling Mirroring' is simply due to the 'Sibling Relationship' which is shared by the non-9 addends, along with the fact that a ' +9 Addition Function' is a form of a 'No Change Function' (as is a '-9 Subtraction Function'), therefore this irrelevant form of 'Sibling Mirroring' will be disregarded throughout this chapter.)


Next, we will Shift the 'Collective +7 Addition Function' upwards by four steps, as is shown below.

```
'Collective +2 Addition Function'
    \(1+2=3\)
    \(2+2=4\)
    \(3+2=5\)
    \(4+2=6\)
    \(5+2=7\)
    \(6+2=8\)
    \(7+2=9\)
    \(8+2=1\)
    \(9+2=2\)
```


## Matching

(sums 3/3 Match)
(sums 4/4 Match)
(sums 5/5 Match)
(sums 6/6 Match)
(sums 7/7 Match)
(sums 8/8 Match)
(sums 9/9 Match)
(sums 1/1 Match)
(sums 2/2 Match)
(Shifted) 'Collective +7 Addition Function'
$5+7=3$
$6+7=4$
$7+7=5$
$8+7=6$
$9+7=7$
$1+7=8$
$2+7=9$
$3+7=1$
$4+7=2$

Above, we can see that Shifting the topmost four of the individual Functions which are contained within the 'Collective +7 Addition Function' from top the to the bottom yields Matching between the horizontally aligned condensed sums of the '2/7 Sibling Collective Addition Functions', which means that the 'Collective +7 Addition Function' displays 'Shifted (4) Mirroring' in relation to the 'Collective +2 Addition Function'.

Next, we will examine the '2/7 Sibling Collective Subtraction Functions', which are shown below.
'Collective -2 Subtraction Function'

| $1-2=8$ | $1-7=3$ |
| :--- | :--- |
| $2-2=0$ | $2-7=4$ |
| $3-2=1$ | $3-7=5$ |
| $4-2=2$ | $4-7=6$ |
| $5-2=3$ | $5-7=7$ |
| $6-2=4$ | $6-7=8$ |
| $7-2=5$ | $7-7=0$ |
| $8-2=6$ | $8-7=1$ |
| $9-2=7$ | $9-7=2$ |

Above, we can see that the '2/7 Sibling Collective Subtraction Functions' do not display any instances of Mirroring or Matching between their horizontally aligned condensed differences.

Next, we will Shift the 'Collective -7 Subtraction Function' downwards by five steps, as is shown below.

| 'Collective -2 Subtraction Function' | Matching | (Shifted) 'Collective -7 Subtraction Function' |
| :---: | :---: | :---: |
| $1-2=8$ | (differences $8 / 8$ Match) | $6-7=8$ |
| $2-2=0$ | (differences 0/0 Match) | $7-7=0$ |
| $3-2=1$ | (differences 1/1 Match) | $8-7=1$ |
| $4-2=2$ | (differences 2/2 Match) | $9-7=2$ |
| $5-2=3$ | (differences 3/3 Match) | $1-7=3$ |
| $6-2=4$ | (differences 4/4 Match) | $2-7=4$ |
| $7-2=5$ | (differences 5/5 Match) | $3-7=5$ |
| $8-2=6$ | (differences 6/6 Match) | $4-7=6$ |
| $9-2=7$ | (differences 7/7 Match) | $5-7=7$ |

Above, we can see that Shifting the topmost five of the individual Functions which are contained within the 'Collective - 7 Subtraction Function' from the top to the bottom yields Matching between the horizontally aligned differences of the ' $2 / 7$ Sibling Collective Subtraction Functions', which means that the 'Collective -7 Subtraction Function' displays 'Shifted (4) Mirroring' in relation to the 'Collective -2 Subtraction Function'. (In this case, with the Shifted Functions comprising more than half of their 'Collective Function', the downward Shift of the majority of individual Functions causes a downward Shift in the overall 'Collective Function', with the remaining four individual Functions reorienting up to the top of the 'Collective Function'.)

Next, we can determine that the '2/7 Sibling (+/-) Sibling Collective Functions' display 'Twisted Mirroring' between one another, as is shown below.


Above, we can see that the '2/7 Sibling (+/-) Sibling Collective Functions' display 'Twisted Mirroring' between one another, with this form of 'Twisted Mirroring' being similar to that which is displayed between the '3/6 Sibling/Cousin (+/-) Sibling Collective Functions', as well as that which is displayed between the '1/8 Sibling/Self-Cousin (+/-) Sibling Collective Functions'. (While a similar form of 'Twisted Mirroring' is displayed between the ' $4 / 5$ Sibling ( $+/-$ ) Sibling Collective Functions', as will be seen in the next section of this chapter.)

Next is a list of the various forms of Mirroring and/or Matching which are displayed between the Related and non-Related 'Collective Functions' of the ' $2 / 7$ Siblings', which is shown below (through the page break). (The list which is shown below does not include the Invalid 'Collective /7 Division Function'.)

> 'Sibling Collective Functions'
> "/2" -"X2" No Mirror or Matching "/2" -"X7" No Mirror or Matching "-2" - "+7" Matching
> "+2" - "-7" Matching
> "+2" - "-2" 'Shifted (4) Mirroring'
> "+7" - "-7" 'Shifted (4) Mirroring'
> 'Cousin Collective Functions'
> "X2" - "+2" No Mirror or Matching
> "X2" - "+7" No Mirror or Matching
> "X7" - "+2" No Mirror or Matching
> "X7" - "+7" No Mirror or Matching
> "/2" - "-2" No Mirror or Matching "/2" - "-7" No Mirror or Matching

Matching 'Collective Functions'<br>"X7" - "X2" 'Inverted And Shifted (1) Mirroring'<br>"+2" - "+7" 'Shifted (4) Mirroring'<br>"-2" - "-7" 'Shifted (4) Mirroring'

non-Related 'Collective Functions'
"X2" - "-2" No Mirror or Matching
"X2" - "-7" No Mirror or Matching
"X7" - "-2" No Mirror or Matching
"X7" - "-7" No Mirror or Matching
"/2" - "+2" No Mirror or Matching "/2" - "+7" No Mirror or Matching

That completes our examination of the instances of Mirroring and/or Matching which are displayed between the various instances of Related (and non-Related) 'Collective Functions' of the '2/7 Siblings'.

In this section, we will examine the 'Collective Functions' of the second of the two traditional pairs of Siblings, this being the ' $4 / 5$ Siblings.

We will start by examining the ' $4 / 5$ Sibling Collective Multiplication Functions', which are shown below.

| 'Collective X4 Multiplication Function' | 'Sibling Mirroring' <br> (products 4/5 Siblings) | 'Collective X5 Multiplication Function' |
| :---: | :---: | :---: |
| $1 \mathrm{X} 4=4$ | (products $8 / 1$ Siblings) | $1 \mathrm{X} 5=5$ |
| $2 \mathrm{X} 4=8$ | (products 3/6 Siblings) | $2 \mathrm{X} 5=1$ |
| $3 \mathrm{X} 4=3$ | (products 7/2 Siblings) | $3 \mathrm{X} 5=6$ |
| $4 \mathrm{X} 4=7$ | (products 2/7 Siblings) | $4 \mathrm{X} 5=2$ |
| $5 \mathrm{X} 4=2$ | (products 6/3 Siblings) | $5 \mathrm{X} 5=7$ |
| $6 \mathrm{X} 4=6$ | (products $1 / 8$ Siblings) | $6 \mathrm{X} 5=3$ |
| $7 \mathrm{X} 4=1$ | (products 5/4 Siblings) | $7 \mathrm{X} 5=8$ |
| $8 \mathrm{X} 4=5$ | (products 9/9 Siblings) | $8 \mathrm{X} 5=4$ |
| $9 \mathrm{X} 4=9$ |  | $9 \mathrm{X} 5=9$ |

Above, we can see that the ' $4 / 5$ Sibling Collective Multiplication Functions' display a simple and previously established form of 'Sibling Mirroring' between one another, in that all of the horizontally aligned pairs of condensed products are Siblings of one another.

Next, we will Invert the 'Collective X5 Multiplication Function' and Shift it one step upwards, as is shown below.

| 'Collective X4 Multiplication Function' | Matching <br> (Inverted and Shifted) <br> (0X4 $=9$ ) | 'Collective X5 Multiplication Function' |
| :---: | :---: | :---: |

Above, we can see that Inverting the 'Collective X5 Multiplication Function' and Shifting it upwards by one step yields Matching between the horizontally aligned condensed products of the ' $4 / 5$ Sibling Collective Multiplication Functions', which means that the 'Collective X5 Multiplication Function' displays 'Inverted And Shifted (1) Mirroring' in relation to the 'Collective X4 Multiplication Function'.

Next, we will examine the ' $4 / 5$ Sibling Collective Division Functions', which are shown below.
'Collective /4 Division Function'
$1 / 4=7$
$2 / 4=5$
3/4=3
4/4=1
5/4=8
6/4=6
$7 / 4=4$
8/4=2
$9 / 4=9$
'Sibling Mirroring'
(quotients $7 / 2$ Siblings)
(quotients 5/4 Siblings)
(quotients 3/6 Siblings)
(quotients $1 / 8$ Siblings)
(quotients $8 / 1$ Siblings)
(quotients $6 / 3$ Siblings)
(quotients $4 / 5$ Siblings)
(quotients $2 / 7$ Siblings)
(quotients $9 / 9$ Siblings)
'Collective $/ 5$ Division Function'
$1 / 5=2$
$2 / 5=4$
$3 / 5=6$
$4 / 5=8$
$5 / 5=1$
$6 / 5=3$
$7 / 5=5$
$8 / 5=7$
$9 / 5=9$

Above, we can see that the ' $4 / 5$ Sibling Collective Division Functions' display a simple and previously established form of 'Sibling Mirroring' between one another, in that all of the horizontally aligned pairs of condensed quotients are Siblings of one another.

Next, we will Invert the 'Collective /5 Division Function' and Shift it upwards by one step, as is shown below.

| 'Collective $/ 4$ Division Function' | Matching <br> $(0 / 4=9)$ | Inverted and Shifted) <br> 'Collective 5 Division Function' |
| :---: | :---: | :---: |
| $1 / 4=7$ | (quotients 9/9 Match) | $9 / 5=9$ |
| $2 / 4=5$ | (quotients $7 / 7$ Match) | $8 / 5=7$ |
| $3 / 4=3$ | (quotients 5/5 Match) | $7 / 5=5$ |
| $4 / 4=1$ | (quotients 3/3 Match) | $6 / 5=3$ |
| $5 / 4=8$ | (quotients 1/1 Match) | $5 / 5=1$ |
| $6 / 4=6$ | (quotients $8 / 8$ Match) | $4 / 5=8$ |
| $7 / 4=4$ | (quotients 6/6 Match) | $3 / 5=6$ |
| $8 / 4=2$ | (quotients 4/4 Match) | $2 / 5=4$ |
| $9 / 4=9$ | (quotients 2/2 Match) | $1 / 5=2$ |
|  | (quotients 9/9 Match) | $(0 / 5=9)$ |

Above, we can see that Inverting the 'Collective /5 Division Function' and Shifting it upwards by one step yields Matching between the horizontally aligned condensed quotients of the ' $4 / 5$ Sibling Collective Division Functions', which means that the 'Collective /5 Division Function' displays 'Inverted And Shifted (1) Mirroring' in relation to the 'Collective /4 Division Function'.

Next, we will examine the '4/5 Sibling (+/-) Sibling Collective Functions' (individually), starting with the ' $4 / 5$ Sibling Collective Addition Functions', which are shown below.
'Collective +4 Addition Function'

$$
1+4=5
$$

$$
2+4=6 \quad 2+5=7
$$

$$
3+4=7 \quad 3+5=8
$$

$$
4+4=8 \quad 4+5=9
$$

$$
5+4=9 \quad 5+5=1
$$

$$
6+4=1 \quad 6+5=2
$$

$$
7+4=2 \quad 7+5=3
$$

$$
8+4=3 \quad 8+5=4
$$

$$
9+4=4 \quad 9+5=5
$$

Above, we can see that the ' $4 / 5$ Sibling Collective Addition Functions' do not display any instances of Mirroring or Matching between their horizontally aligned condensed sums.

Next, we will Shift the 'Collective +5 Addition Function' downwards by one step, as is shown below.
'Collective +4 Addition Function'
$1+4=5$
$2+4=6$
$3+4=7$
$4+4=8$
$5+4=9$
$6+4=1$
$7+4=2$
$8+4=3$
$9+4=4$

Matching
(sums 5/5 Match)
(sums 6/6 Match)
(sums 7/7 Match)
(sums 8/8 Match)
(sums 9/9 Match)
(sums 1/1 Match)
(sums 2/2 Match)
(sums 3/3 Match)
(sums 4/4 Match)
(Shifted) 'Collective +5 Addition Function'
$9+5=5$
$1+5=6$
$2+5=7$
$3+5=8$
$4+5=9$
$5+5=1$
$6+5=2$
$7+5=3$
$8+5=4$

Above, we can see that Shifting the 'Collective +5 Addition Function' downwards by one step yields Matching between the horizontally aligned condensed sums of the ' $4 / 5$ Sibling Collective Addition Functions', which means that the 'Collective +5 Addition Function' displays 'Inverted And Shifted (1) Mirroring' in relation to the 'Collective +4 Addition Function'.

Next, we will examine the ' $4 / 5$ Sibling Collective Subtraction Functions', which are shown below.

| 'Collective -4 Subtraction Function' | 'Collective -5 Subtracti |
| :---: | :---: |
| $1-4=6$ | $1-5=5$ |
| $2-4=7$ | $2-5=6$ |
| $3-4=8$ | $3-5=7$ |
| $4-4=0$ | $4-5=8$ |
| $5-4=1$ | $5-5=0$ |
| $6-4=2$ | $6-5=1$ |
| $7-4=3$ | $7-5=2$ |
| $8-4=4$ | $8-5=3$ |
| $9-4=5$ | $9-5=4$ |

Above, we can see that the ' $4 / 5$ Sibling Collective Subtraction Functions' do not display any instances of Mirroring or Matching between their horizontally aligned condensed differences.

Next, we will Shift the 'Collective -5 Subtraction Function' upwards by one step, as is shown below.

| 'Collective -4 Subtraction Function' | Matching | (Shifted) 'Collective $-\mathbf{5}$ Subtraction Function' |
| :---: | :---: | :---: |
| $1-4=6$ | (differences 6/6 Match) | $2-5=6$ |
| $2-4=7$ | (differences 7/7 Match) | $3-5=7$ |
| $3-4=8$ | (differences $8 / 8$ Match) | $4-5=8$ |
| $4-4=0$ | (differences $0 / 0$ Match) | $5-5=0$ |
| $5-4=1$ | (differences 1/1 Match) | $6-5=1$ |
| $6-4=2$ | (differences $2 / 2$ Match) | $7-5=2$ |
| $7-4=3$ | (differences 3/3 Match) | $8-5=3$ |
| $8-4=4$ | (differences 4/4 Match) | $9-5=4$ |
| $9-4=5$ | (differences 5/5 Match) | $1-5=5$ |

Above, we can see that Shifting the 'Collective -5 Subtraction Function' upwards by one step yields Matching between the horizontally aligned condensed differences of the ' $4 / 5$ Sibling Collective Subtraction Functions', which means that the 'Collective -5 Subtraction Function' displays 'Inverted And Shifted (1) Mirroring' in relation to the 'Collective -4 Subtraction Function'.

Next, we can determine that the '4/5 Sibling (+/-) Sibling Collective Functions' display 'Twisted Mirroring' between one another, as is shown below (through the page break).

```
'Collective +4 Addition Function'
    1+4=5
    2+4=6 2+5=7
    3+4=7 3+5=8
    4+4=8 4+5=9
    5+4=9 5+5=1
    6+4=1 6+5=2
    7+4=2 7+5=3
    8+4=3 8+5=4
    9+4=4 9+5=5
```

(Twisted) 'Collective -5 Subtraction Function'
$1-5=5$
2-5=6
$3-5=7$
$4-5=8$

$$
5-5=0
$$

$6-5=1$
$7-5=2$
$8-5=3$
$9-5=4$
(Twisted)'Collective -4 Subtraction Function'
$1-4=6$
$2-4=7$
$3-4=8$
$4-4=0$
$5-4=1$
$6-4=2$
$7-4=3$
$8-4=4$
$9-4=5$

Above, we can see that the ' $4 / 5$ Sibling ( $+/-$ ) Sibling Collective Functions' display 'Twisted Mirroring' between one another, with this form of 'Twisted Mirroring' being similar to that which is displayed between the ' $1 / 8$ Sibling/Self-Cousin ( $+/-$ ) Sibling Collective Functions', the '3/6 Sibling/Cousin ( $+/-$ ) Sibling Collective Functions', and the ' $2 / 7$ Sibling ( $+/-$ ) Sibling Collective Functions'.

Next is a list of the various forms of Mirroring and/or Matching which are displayed between the Related and non-Related 'Collective Functions' of the ' $4 / 5$ Siblings', which is shown below.

> 'Sibling Collective Functions'
> "X4" - "/4" No Mirror or Matching "X4" - "/5" No Mirror or Matching "X5" - "/5" No Mirror or Matching "X5" - "/4" No Mirror or Matching "+4" - "-5" Matching "+4" - "-4"'Shifted (1) Mirroring' "+5" - "-5"'Shifted (1) Mirroring' "-4" -"+5" Matching

## 'Cousin Collective Functions'

"X4" - "+4"No Mirror or Matching
"X4" - "+5"No Mirror or Matching
"/4" - "-4" No Mirror or Matching
"/4" - "-5" No Mirror or Matching

## Matching 'Collective Functions'

"/4" - "/5"'Inverted And Shifted (1) Mirroring'
"X4" - "X5" 'Inverted And Shifted (1) Mirroring'
"+4" - "+5" 'Shifted (1) Mirroring'
"-4" - "-5" 'Shifted (1) Mirroring'
non-Related 'Collective Functions'
"X4" - "-4" No Mirror or Matching
"X4" - "-5" No Mirror or Matching
"/4" -"+4" No Mirror or Matching
"/4" -"+5" No Mirror or Matching

That completes our examination of the instances of Mirroring and/or Matching which are displayed between the various instances of Related (and non-Related) 'Collective Functions' of the ' $4 / 5$ Siblings'.
*********

In this section, we will examine the various forms of Mirroring which are displayed between the 'Collective Functions' of the two pairs of 'External Cousins', these being the $2 / 5$ and $4 / 7$ Cousins. (While the 'Collective Functions' of the 'Internal Cousins' (these being the $1 / 8$ and $3 / 6$ Sibling/Cousins) have already been examined in previous sections as Sibling/Cousins.) In the first half of this section, we will examine the 'Shuffled Mirroring' which is displayed (individually) between the 'Collective Multiplication Functions' and the (available) 'Collective Division Functions' of the 'External Cousin' pairs, all of which is shown and explained below (while we will examine the '(+/-) Sibling Collective Functions' of the two pairs of 'External Cousins' in the second half of this section). (The overall form of 'Shuffled Mirroring' which will be seen in this section is an important form of Mirroring, the reasons for which will be explained in "Chapter Eight: 'Validating the Invalid Functions' ".)

First, we will examine the ' $2 / 5$ Cousin Collective Multiplication Functions', which are shown below, with the various forms of Matching which are displayed between their horizontally aligned condensed products highlighted in various arbitrary colors. (In this case, the two instances of 'Cousin Matching' are both highlighted in green, the four instances of 'Family Group Matching' are all highlighted in purple, and the three instances of Numerically Matching condensed products are all shown in nonhighlighted black.)
'Collective X2 Multiplication Function'
$1 \mathrm{X} 2=2$
$2 \mathrm{X} 2=4$
3X2=6
$4 \mathrm{X} 2=8$
$5 \mathrm{X} 2=1$
$6 \times 2=3$
$7 \mathrm{X} 2=5$
8X2=7
9X2 $=9$
'Collective X5 Multiplication Function'
1X5=5
2X5=1
3X5=6
4X5=2
5X5=7
$6 \mathrm{X} 5=3$
$7 \mathrm{X} 5=8$
8X5=4
9X5=9

Above, we can see the various forms of Matching which are displayed between the horizontally aligned condensed products of the ' $2 / 5$ Cousin Collective Multiplication Functions'. (All of these forms of Matching are irrelevant for our current purposes, and will therefore be disregarded throughout this section.)

Next, we will Shuffle the 'Collective X5 Multiplication Function' in order to yield Matching between the horizontally aligned condensed products of the ' $2 / 5$ Cousin Collective Multiplication Functions', as is shown below.
'Collective X2 Multiplication Function'
$1 \mathrm{X} 2=2$
$2 \mathrm{X} 2=4$
$3 \mathrm{X} 2=6$
4X2=8
$5 \mathrm{X} 2=1$
$6 \mathrm{X} 2=3$
7X2=5
$8 \mathrm{X} 2=7$
9X2 $=9$

Matching
(products 2/2 Match)
(products 4/4 Match)
(products 6/6 Match)
(products $8 / 8$ Match)
(products 1/1 Match)
(products 3/3 Match)
(products $5 / 5$ Match)
(products 7/7 Match)
(products 9/9 Match)
(Shuffled) 'Collective X5 Multiplication Function'
4X5=2
$8 \mathrm{X} 5=4$
$3 \times 5=6$
7X5=8
2X5=1
$6 \times 5=3$
1X5=5
5X5=7
9X5 $=9$

Above, we can see that this particular form of Shuffling is patterned, in that the topmost two of the individual 'X5 Multiplication Functions' (these being "1X5" and "2X5") both move downwards, while the bottommost two of the individual non-9 'X5 Multiplication Functions' (these being "8X5" and "7X5") both move upwards, and the middle two of the individual 'X5 Multiplication Functions' (these being "4X5" and "5X5") display a form of behavioral Mirroring between one another, with the Function of "4X5" moving upward, and the Function of "5X5" moving downward. (While the individual 'X5 Multiplication Functions' which involve the 3, the 6, and the 9 do not move in either direction.)

This same form of 'Shuffled Mirroring' is shown again below, this time with arbitrarily colored lines indicating the Shuffling. (In this diagram, the topmost lines are both highlighted in green, the bottommost lines are both highlighted in red, and the middle two lines are both highlighted in blue, while the three horizontal lines which involve the '3,6,9 Family Group' members are all shown in nonhighlighted black.)


Above, we can see that the ' $2 / 5$ Cousin Collective Multiplication Functions' display a form of 'Shuffled Mirroring' between one another, with this particular form of 'Shuffled Mirroring' involving Shuffle lines which intersect (at two vertically aligned intersection points) about two-thirds of the way over to the right side of the diagram.

Next, we will examine the ' $4 / 7$ Cousin Collective Multiplication Functions', which display a similar form of 'Shuffled Mirroring' between one another, as is shown and explained below.

First, we will examine the various forms of Matching which are displayed between the horizontally aligned condensed products of the '4/7 Cousin Collective Multiplication Functions', all of which are
highlighted below in arbitrary colors. (In this case, the two instances of 'Cousin Matching' are both highlighted in green, the four instances of 'Family Group Matching' are all highlighted in purple, and the three instances of Numerically Matching condensed products are all shown in non-highlighted black.)


Above, we can see the various forms of Matching which are displayed between the horizontally aligned condensed products of the '4/7 Cousin Collective Multiplication Functions'. (Again, all of these forms of Matching are irrelevant for our current purposes, and will therefore be disregarded throughout this section.)

Next, we will use colored lines to indicate the 'Shuffled Mirroring' which is displayed between the '4/7 Cousin Collective Multiplication Functions', as is shown below. (The Shuffle lines which are seen in this example involve the same arbitrary color code for the as was used in relation to the previous example.)


Above, we can see that these Shuffle lines display Mirroring in relation to those which were seen in relation to the ' $2 / 5$ Cousin Collective Multiplication Functions', in that these Shuffle lines intersect about two-thirds of the way over to the left side of the diagram (where as in relation to the ' $2 / 5$ Cousin Collective Multiplication Functions', the Shuffle lines all intersect towards the right side of the diagram).

Next, in order to better illustrate the Mirroring which is displayed between these two instances of colored Shuffle lines, we will list these two pairs of 'Collective Multiplication Functions' one beneath the other, as is shown below (with the ' $2 / 5$ Cousin Collective Multiplication Functions' shown above the ' $4 / 7$ Cousin Collective Multiplication Functions').
'Collective X2 Multiplication Function'

| $1 \mathrm{X} 2=2$ | $1 \mathrm{X} 5=5$ |
| :--- | :--- |
| $2 \mathrm{X} 2=4$ | $2 \mathrm{5}=1$ |
| $3 \mathrm{X} 2=6$ | $3 \times 5=6$ |
| $4 \mathrm{X} 2=8$ | $4 \mathrm{X} 5=2$ |
| $5 \mathrm{X} 2=1$ | $5 \mathrm{5}=7$ |
| $6 \mathrm{X} 2=3$ | $6 \mathrm{5}=3$ |
| $7 \mathrm{X} 2=5$ | $7 \mathrm{~K} 5=8$ |
| $8 \mathrm{X} 2=7$ | $8 \times 5=4$ |
| $9 \mathrm{X} 2=9$ | $9 \mathrm{X} 5=9$ |


| 1X4=4 | $1 \mathrm{X} 7=7$ |
| :---: | :---: |
| 2X4=8 | $2 \mathrm{X} 7=5$ |
| 3X4=3 | - $3 \times 7=3$ |
| 4X4=7 | $4 \mathrm{X} 7=1$ |
| 5X4=2 | $5 \mathrm{X} 7=8$ |
| 6X4=6 | $6 \mathrm{X} 7=6$ |
| 7X4=1 | 7X7=4 |
| 8X4=5 | $8 \times 7=2$ |
| 9X4=9 | -9X7=9 |

Above, we can see the previously established form of Mirroring which is displayed between these two overall instances of Shuffle lines.

Next, we will examine a chart which contains these two instances of Shuffled lines laid one on top of the another (with all of the individual Functions removed), in order to better indicate the form of Mirroring which is displayed between the Shuffle lines of these two pairs of 'Collective Multiplication Functions', as is shown below.


Above, we see a diagram which allows us to get a clearer look at the various forms of Mirroring and Matching which are displayed between the Shuffle lines of the 'Collective Multiplication Functions' of the $2 / 5$ and $4 / 7$ Cousins. (This diagram will be seen again in "Chapter Eight: 'Validating the Invalid Functions' ".)

Next, we will examine the '2/5 Cousin Collective Division Functions', which display a similar form of 'Shuffled Mirroring' between one another, as is shown and explained below.

First, we will examine the various forms of Matching which are displayed between the horizontally aligned condensed quotients of the ' $2 / 5$ Cousin Collective Division Functions', all of which are highlighted below in arbitrary colors. (In this case, the two instances of 'Cousin Matching' are both highlighted in green, the four instances of 'Family Group Matching' are all highlighted in purple, and the three instances of Numerically Matching condensed quotients are all shown in non-highlighted black.)
'Collective /2 Division Function'
$1 / 2=5$
$2 / 2=1$
$3 / 2=6$
$4 / 2=2$
$5 / 2=7$
$6 / 2=3$
$7 / 2=8$
$8 / 2=4$
$9 / 2=9$
'Collective /5 Division Function'
$1 / 5=2$
$2 / 5=4$
$3 / 5=6$
$4 / 5=8$
$5 / 5=1$
$6 / 5=3$
$7 / 5=5$
$8 / 5=7$
$9 / 5=9$

Above, we can see the various forms of Matching which are displayed between the horizontally aligned condensed quotients of the ' $2 / 5$ Cousin Collective Division Functions'. (Again, all of these forms of Matching are irrelevant for our current purposes, and will therefore be disregarded throughout this section.)

Next, we will use colored lines to indicate the 'Shuffled Mirroring' which is displayed between the ' $2 / 5$ Cousin Collective Division Functions', as is shown below. (The Shuffle lines which are seen in this example involve the same arbitrary color code for the as was used in relation to the previous two examples.)


Above, we can see that these Shuffle lines display Mirroring in relation to those which were seen in relation to the ' $2 / 5$ Cousin Collective Multiplication Functions', in that these Shuffle lines intersect about two-thirds of the way over to the left side of the diagram (where as in relation to the ' $2 / 5$ Cousin Collective Multiplication Functions', the Shuffle lines all intersect towards the right side of the diagram). This means that these Shuffle lines display Matching in relation to those which were seen in relation to the ' $4 / 7$ Cousin Collective Multiplication Functions'.

Unfortunately, at this point, we do not have a Valid 'Collective /7 Division Function' to work with, which means that we cannot compare the ' $4 / 7$ Cousin Collective Division Functions' to one another, nor can we compare them collectively to the ' $2 / 5$ Cousin Collective Division Functions'. Though all indications are that the '4/7 Cousin Collective Division Functions' would involve Shuffle lines which display Matching in relation to the Shuffle lines of the '2/5 Cousin Collective Multiplication Functions'. (This will be confirmed in "Chapter Eight: 'Validating the Invalid Functions' ", where the various forms of 'Shuffled Mirroring' which are displayed between the 'Collective Functions' of the 'External Cousins' will assist us in our attempts to Validate the currently Invalid '/7 Division Functions'.)

Next, the remainder of this section will involve a quick examination of the '(+/-) Sibling Collective Functions' of the two pairs of 'External Cousins', all of which display simple forms of 'Shifted Mirroring' between one another, as is shown and explained below.

We will start by examining the ' $2 / 5$ Cousin Collective Addition Functions', which are shown below, with the 'Collective +5 Addition Function' Shifted downwards by three steps.

```
'Collective +2 Addition Function'
```

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

Matching
(sums 3/3 Match)
(sums 4/4 Match)
(sums 5/5 Match)
(sums 6/6 Match)
(sums 7/7 Match)
(sums 8/8 Match)
(sums 9/9 Match)
(sums 1/1 Match)
(sums 2/2 Match)
(Shifted) 'Collective +5 Addition Function'
$7+5=3$
$8+5=4$
$9+5=5$
$1+5=6$
$2+5=7$
$3+5=8$
$4+5=9$
$5+5=1$
$6+7=2$

Above, we can see that the 'Collective +5 Addition Function' displays 'Shifted (3) Mirroring' in relation to the 'Collective +2 Addition Function'.

Next, we will examine the ' $4 / 7$ Cousin Collective Addition Functions', which are shown below, with the 'Collective +7 Addition Function' Shifted downwards by three steps.
'Collective +4 Addition Function'
$1+4=5$
$2+4=6$
$3+4=7$
$4+4=8$
$5+4=9$
$6+4=1$
$7+4=2$
$8+4=3$
$9+4=4$

Matching
(sums 5/5 Match)
(sums 6/6 Match)
(sums 7/7 Match)
(sums 8/8 Match)
(sums 9/9 Match)
(sums 1/1 Match)
(sums 2/2 Match)
(sums 3/3 Match)
(sums 4/4 Match)
(Shifted) 'Collective +7 Addition Function'
$7+7=5$
$8+7=6$
$9+7=7$
$1+7=8$
$2+7=9$
$3+7=1$
$4+7=2$
$5+7=3$
$6+7=4$

Above, we can see that the 'Collective +7 Addition Function' displays 'Shifted (3) Mirroring' in relation to the 'Collective +4 Addition Function'.

Next, we will examine the '2/5 Cousin Collective Subtraction Functions', which are shown below, with the 'Collective -5 Subtraction Function' Shifted upwards by three steps.

## 'Collective -2 Subtraction Function'

$1-2=8$
$2-2=0$
$3-2=1$
$4-2=2$
$5-2=3$
$6-2=4$
$7-2=5$
$8-2=6$
$9-2=7$

Matching
(differences 8/8 Match)
(differences 0/0 Match)
(differences 1/1 Match)
(differences 2/2 Match)
(differences 3/3 Match)
(differences 4/4 Match)
(differences 5/5 Match)
(differences 6/6 Match)
(differences 7/7 Match)
(Shifted) 'Collective -5 Subtraction Function'
$4-5=8$
5-5=0
$6-5=1$
$7-5=2$
$8-5=3$
$9-5=4$
$1-5=5$
$2-5=6$
$3-5=7$

Above, we can see that the 'Collective -5 Subtraction Function' displays 'Shifted (3) Mirroring' in relation to the 'Collective -2 Subtraction Function'.

Next, we will examine the '4/7 Cousin Collective Subtraction Functions', which are shown below, with the 'Collective -7 Subtraction Function' Shifted upwards by three steps.

| 'Collective -4 Subtraction Function' | Matching | (Shifted) 'Collective -7 Subtraction Function' |
| :---: | :---: | :---: |
| $1-4=6$ | (differences 6/6 Match) | $4-7=6$ |
| $2-4=7$ | (differences 7/7 Match) | $5-7=7$ |
| $3-4=8$ | (differences 8/8 Match) | $6-7=8$ |
| $4-4=0$ | (differences 0/0 Match) | $7-7=0$ |
| $5-4=1$ | (differences 1/1 Match) | $8-7=1$ |
| $6-4=2$ | (differences 2/2 Match) | $9-7=2$ |
| $7-4=3$ | (differences 3/3 Match) | $1-7=3$ |
| $8-4=4$ | (differences 4/4 Match) | $2-7=4$ |
| $9-4=5$ | (differences 5/5 Match) | $3-7=5$ |

Above, we can see that the 'Collective -7 Subtraction Function' displays 'Shifted (3) Mirroring' in relation to the 'Collective -4 Subtraction Function'.

That brings this section, and therefore this Standard Model of Physics themed chapter, to a close. As was mentioned earlier, the various forms of 'Shuffled Mirroring' which are displayed between the 'Collective Functions' of the 'External Cousins' will assist us in our attempts to Validate the currently Invalid '/7 Division Functions', as will be seen in "Chapter Eight: 'Validating the Invalid Functions' ".

