Chapter Two: "Infinitely Repeating Decimal Numbers"

This chapter will involve a brief examination of the overall concept of 'Infinitely Repeating Decimal Numbers', as well as that of the Infinitely repeating 'Repetition Patterns' of which these 'Infinitely Repeating Decimal Numbers' are comprised. (In relation to traditional Mathematics, these 'Repetition Patterns' are referred to as *repetends*.) All instances of 'Infinitely Repeating Decimal Numbers' are yielded through what will be referred to as "*Invalid Functions*", as will be seen and explained as we work our way through this chapter. Throughout this book, we will encounter four overall 'Invalid Functions', these being the '/3 Division Function', the '/6 Division Function', the '/7 Division Function', and the '/9 Division Function' (with the 'Invalid Functions' of "/3", "/6", "/7", and "/9" indicating our first example of the 'Connection Between The 7 And The 3,6,9 Family Group'). These four overall 'Invalid Functions' will be seen throughout these chapters, and will eventually be solved in "Chapter Eight: Solving the Invalid Functions". (Also, it should be noted that most of the individual 'Division Functions' which involve divisors which are Octaves or Multiples of the 3, the 6, the 7, or the 9 are also 'Invalid Functions'. Though in this book, we will not be working with any of the individual 'Invalid Functions' which involve multiple-digit divisors.)

In "Chapter One", we Divided the 1 repeatedly by the 2, with these Functions having yielded a series of non-condensed quotients which involve non-repeating 'Decimal Numbers' (such as .5, .25, .125, etc.). In that chapter, it was explained that in relation to non-repeating 'Decimal Numbers', the 'Whole Number' is included when determining the condensed value of the overall 'Decimal Number' (for example, the non-repeating 'Decimal Number' 1.25 condenses to the 8, in that "1+2+5=8").

Though some 'Division Functions' will yield 'Decimal Number' quotients which are not finite, and instead carry on Infinitely. These individual 'Invalid Functions' all yield what will be referred to as *'Infinitely Repeating Decimal Number' quotients*, all of which are comprised of Infinitely repeating 'Repetition Patterns'. These 'Repetition Patterns' are the mechanism by which 'Infinitely Repeating Decimal Numbers' repeat Infinitely, as is shown and explained below.

To start, we will Divide the 1 by the 3, as is shown below.

```
             1
      /      |      \
     /       |       \
    /        |        \
.333...   .333...   .333...
```

Above, we can see that the Function of "1/3" yields three 'Infinitely Repeating Decimal Number' quotients, all of which display Matching between one another. Throughout this book, we will be working with a variety of 'Infinitely Repeating Decimal Numbers', most of which will be shown through three iterations of their respective 'Repetition Patterns', the first of which will be highlighted arbitrarily in red (as is the case in relation to the chart which is seen above). (The instances of 'Infinitely Repeating Decimal Numbers' which will be seen throughout this book will always be followed by ellipses ("...'s"), as is the case above.) The method which is used to determine the condensed value of an 'Infinitely Repeating Decimal Number' involves the Addition of all of the digits which are contained within one iteration of its 'Repetition Pattern', therefore in this case, which involves a single-digit 'Repetition Pattern' which consists of a lone 3, the condensed value of the 'Infinitely Repeating Decimal Number' is 3. The '/3 Division Function' will be examined further in "Chapter 3: Dividing by the 3", therefore for now, we will just move along to the next set of 'Infinitely Repeating Decimal Number' quotients.

Next, we will Divide the 1 by the 6, as is shown below.

```
                              1
      /        /        /          \        \        \
     /        /        /            \        \        \
    /        /        /              \        \        \
 .1666...  .1666...  .1666...    .1666...  .1666...  .1666...
```

Above, we can see that the Function of "1/6" yields six 'Infinitely Repeating Decimal Number' quotients, all of which display Matching between one another. While these 'Infinitely Repeating Decimal Number' quotients display a new characteristic which involves the fact that they all begin with a non-repeating digit (this being the 1, which is highlighted arbitrarily in green). Most of the 'Infinitely Repeating Decimal Number' quotients which are yielded by the '/6 Division Function' (as well as those which are yielded by certain other 'Invalid Functions') begin with one or more digits which do not repeat, and instead occur only once. These non-repeating digits will be referred to as the *non-repeating part* of the overall 'Decimal Number', and will always be highlighted arbitrarily in green, as is the case above. While in this case, the non-repeating parts of the 'Infinitely Repeating Decimal Number' quotients are each followed by a single-digit 'Repetition Pattern' which involves the 6, which means that each of these 'Infinitely Repeating Decimal Number' quotients condenses to the 6. The '/6 Division Function' will be the subject of "Chapter 6: Dividing by the 6", therefore for now, we will just move along to the next set of 'Infinitely Repeating Decimal Number' quotients.

Next, we will Divide the 1 by the 7, as is shown below. (The 'Repetition Patterns' which are contained within the chart which is shown below are only shown through one red iteration, as will usually be the case in relation to these longer 'Repetition Patterns'.)

```
                                    1
     /          /          /          |          \          \          \
    /          /          /           |           \          \          \
   /          /          /            |            \          \          \
.142857...  .142857...  .142857...  .142857...  .142857...  .142857...  .142857...
```

Above, we can see that the Function of "1/7" yields seven 'Infinitely Repeating Decimal Number' quotients, all of which display Matching between one another. These 'Infinitely Repeating Decimal Number' quotient contain a very important 'Repetition Pattern', one which condenses to the 9, in that "1+4+2+8+5+7=27(9)". (This is a simple example of the manner in which the condensed value of a multiple-digit 'Repetition Pattern' is determined. While the condensed value of a 'Repetition Pattern' is also considered to be the condensed value of the overall 'Infinitely Repeating Decimal Number' which contains the 'Repetition Pattern', as was mentioned earlier.) This particular 'Repetition Pattern' involves a very important six-digit pattern which will be referred to as the "*Enneagram Pattern*". The 142857... 'Enneagram Pattern' (which will be encountered again in several of the upcoming chapters) is an Infinitely repeating pattern which involves the '1,2,4,8,7,5 Core Group', only with the 2 and the 4 and the 5 and the 8 each juxtaposed. The 'Enneagram Pattern' will be the subject of "Chapter 7: Dividing by the 7", therefore for now, we will just move along to the next set of 'Infinitely Repeating Decimal Number' quotients.

(It should be noted at this point that while the 'Enneagram Pattern' itself condenses to the 9 (in that "1+4+2+8+5+7=27(9)"), the intuitive condensed value of 9 is not the true condensed value of the 'Infinitely Repeating Decimal Number' quotient which is yielded by the 'Invalid Function' of "1/7", as will be explained in "Chapter Eight: Solving the Invalid Functions".)

Finally, we will Divide the 1 by the 9, as is shown below.

```
                                        1
      /        /        /        /      |      \        \        \        \
     /        /        /        /       |       \        \        \        \
    /        /        /        /        |        \        \        \        \
 .111...  .111...  .111...  .111...  .111...  .111...  .111...  .111...  .111...
```

Above, we can see that the Function of "1/9" yields nine 'Infinitely Repeating Decimal Number' quotients, all of which display Matching between one another. These 'Infinitely Repeating Decimal Number' quotients all contain single-digit 'Repetition Patterns', each of which condenses to the 1. The '/9 Division Function' is an important Function, the reasons for which will be seen in upcoming Standard Model of Physics themed chapters.

(It should be noted at this point that while the single-digit 'Repetition Pattern' which is contained within the 'Infinitely Repeating Decimal Number' quotient which is yielded by the Function of "1/9" condenses to the 1, the condensed value of 1 is not the condensed value of the 'Infinitely Repeating Decimal Number' quotient which is yielded by the Function of "1/9". This characteristic is due to the overall uniqueness of the '/9 Division Function', as will be explained in "Chapter Eight: Solving the Invalid Functions".)

That brings this chapter on 'Infinitely Repeating Decimal Numbers' to a close. The concepts of 'Infinitely Repeating Decimal Numbers' and their constituent 'Repetition Patterns' will be seen again and examined more thoroughly in upcoming chapters, including "Chapter 3: Dividing by the 3", "Chapter 6: Dividing by the 6", and "Chapter 7: Dividing by the 7", along with their various sub-chapters.