Chapter 3: "Dividing by the 3"

In this chapter, we will divide the 1 repeatedly by the 3, in order to examine the quotients which are yielded by one cycle of nine of these division functions, all of which are considered to be invalid functions. The quotients which are yielded by these nine division functions all involve infinitely repeating decimal numbers, each of which contains a unique and infinitely repeating repetition pattern, and it is these repetition patterns which we will be working with in this chapter. (To clarify, the overall concept of repetition patterns was explained in Chapter Two, while the concept of cycles will be seen in the second section of this chapter, and will be explained a bit more thoroughly in "Chapter 6: Dividing by the 6".)

We will start by examining the first iteration of the function "1/3", which is shown below.

$$1/3= .333...$$

Above, we can see that the function "1/3" yields an infinitely repeating decimal number quotient which contains a single-digit repetition pattern that consists of a lone 3, which means that this repetition pattern condenses to the 3. The infinitely repeating repetition patterns which are contained within these infinitely repeating decimal number quotients will each be shown through three iterations, as is the case above, with the first iteration highlighted arbitrarily in red, and the second two non-highlighted iterations of the longer repetition patterns separated by a "(*)", for clarity, as was explained in Chapter Two. (In this case, the repetition pattern is simply a lone 3, which is highlighted once in red, and then shown twice more in black.)

Next, we will examine the second iteration of the function "1/3", which is shown below. (To clarify, the second iteration of the function "1/3" can also be considered to be the function ".333.../3", "1/3/3", or "1/9", as all three of these functions yield the same quotient.)

$$.333.../3= .111...$$

Above, we can see that this function yields an infinitely repeating decimal number quotient which contains a single-digit repetition pattern which consists of a lone 1, and therefore condenses to the 1.

Next, we will examine the third iteration of the function "1/3", which is shown below (with this function being equivalent to the function "1/27").

$$.111.../3= .037037037...$$

Above, we can see that this function yields an infinitely repeating decimal number quotient which contains a repetition pattern which contains three digits. Though while this repetition pattern contains a quantity of digits which is three times greater than the quantity of digits which is contained within the repetition pattern which was seen in relation to the previous example, in that "3X1=3", this repetition pattern is still equal to the previous repetition pattern in terms of its condensed value, as "0+3+7=10(1)". This condensed value of 1 indicates that these repetition patterns display a sub-pattern which involves the fact that they each add to a non-condensed value which condenses to the 1, with the

exclusion of the first of these examples, which involves a repetition pattern that condenses to the 3 (this sub-pattern will be tracked as we progress). Also, it should be noted that this 037... repetition pattern involves a very basic example of the connection between the 7 and the 3,6,9 family group, in that it contains the 3 and the 7 (along with the 0).

Next, we will examine the fourth iteration of the function "1/3", which is shown below (with this function being equivalent to the function "1/81").

.037037037.../3= .012345679012345679(*)012345679...

Above, we can see that the repetition pattern which is contained within this infinitely repeating decimal number quotient contains nine digits, which means that this repetition pattern contains a quantity of digits which is three times greater than the quantity of digits which is contained within the repetition pattern which was seen in relation to the previous example, in that "3X3=9". This indicates that the quantities of digits which are contained within these repetition patterns display an "X3" growth pattern, with the exclusion of the first two of these repetition patterns, each of which contains one digit. At this point, this "X3" growth pattern involves the growth of one digit to three digits, which involves the function "1X3=3", and then of three digits to nine digits, which involves the function "3X3=9". This means that we would expect the next repetition pattern to contain twenty-seven digits, as "9X3=27". (This "X3" growth pattern involves a variation on the overall concept of growth patterns, which will be seen in various forms throughout these chapters, and will always involve regular, patterned forms of growth.) Also, we can determine that this repetition pattern adds to a non-condensed sum of 37, with this non-condensed sum involving another example of the connection between the 7 and the 3,6,9 family group, in that the multiple-digit number 37 is comprised of the 3 and the 7. While the non-condensed sum of 37 condenses to the 1, with this condensed value of 1 confirming the condensed 1 sub-pattern which is displayed by the non-condensed sums of these repetition patterns. (As was mentioned a moment ago, this condensed 1 sub-pattern does not involve the first of these examples, which involves a repetition pattern which condenses to the 3.) This 012345679... repetition pattern, which involves a complete, ordered base set, only without the 8, will be seen a few times as we work our way through these chapters, and will be examined more thoroughly in "Chapter 3.3: Progressive Patterns".

Also, it should be noted that the example which is seen above involves a repetition pattern which contains a quantity of nine digits. This quantity of nine indicates another of the sub-patterns which are displayed by this cycle of iterations, in that all of the quotients which will be examined throughout the remainder of this chapter will contain repetition patterns which contain a quantity of digits which condenses to the 9. This is due to the fact that any multiplication function which involves at least one factor which condenses to the 9 will invariably yield a product which condenses to the 9. (In this case, the factor of 9 will yield a product of 27 via the previously established "X3" growth pattern, in that "9X3=27(9)".) This behavior arises as a result of the attractive characteristic which the 9 displays in relation to the multiplication function, as will be explained in upcoming Standard Model of physics themed chapters, as well as in "Chapter Eight: Solving the Invalid Functions".

Next, we will examine the fifth iteration of the function "1/3", which is shown below (with this function being equivalent to the function "1/243"). (Due to spatial constraints, from this point on, the diagrams will only display the infinitely repeating decimal number quotients, and not the functions which yield them.)

.00411522633744855967078189300411522633744855967078189 3(*)0041152263374485596 70781893...

Above, we can see that this repetition pattern contains twenty-seven digits, with this quantity of twenty-seven confirming the "X3" growth pattern which is displayed by the quantities of digits which are contained within these repetition patterns, in that "9X3=27". While this quantity of twenty-seven also maintains the condensed 9 sub-pattern which is displayed by the quantities of digits which are contained within these repetition patterns, as "2+7=9". Also, we can determine that this repetition pattern adds to a non-condensed sum of 118, which condenses to the 1, with this condensed value of 1 maintaining the previously established condensed 1 sub-pattern which is displayed by the non-condensed sums of these repetition patterns.

Next, we will examine the quotient which is yielded by the sixth iteration of the function "1/3", which is shown below (with this function being equivalent to the function "1/729"). (In this example, only two iterations of the repetition pattern are shown, due to spatial constraints.)

.00137174211248285322359396433470507544581618655692729766803840877914951989026063 10 013717421124828532235939643347050754458161865569272976680384087791495198902606 31...

Above, we can see that this repetition pattern contains eighty-one digits, with this quantity of eighty-one maintaining the "X3" growth pattern which is displayed by the quantities of digits which are contained within these repetition patterns, in that "27X3=81". While this quantity of eighty-one confirms the condensed 9 sub-pattern which is displayed by the quantities of digits which are contained within these repetition patterns, in that "8+1=9". Also, we can determine that this repetition pattern adds to a non-condensed sum of 361, which condenses to the 1, with this condensed value of 1 maintaining the previously established condensed 1 sub-pattern which is displayed by the non-condensed sums of these repetition patterns.

Next, we will examine the quotient which is yielded by the seventh iteration of the function "1/3", which is shown below (with this function being equivalent to the function "1/2187"). (In this example, only two iterations of the repetition pattern are shown, due to spatial constraints.)

.000457247370827617741197988111568358481938728852309099222679469593049839963420210 3 3379058070416095107453132144490169181527206218564243255601280292638317329675354366 7 12391403749428440786465477823502514860539551897576588934613625971650663008687700045 724737082761774119798811156835848193872885230909922267946959304983996342021033379 05 807041609510745313214449016918152720621856424325556012802926383173296753543667123 914 037494284407864654778235025148605395518975765889346136259716506630086877...

Above, we can see that this repetition pattern contains two hundred and forty-three digits, with this quantity of two hundred and forty-three maintaining the "X3" growth pattern which is displayed by the quantities of digits which are contained within these repetition patterns, in that "81X3=243". While this quantity of two hundred and forty-three maintains the previously established condensed 9 sub-pattern which is displayed by the quantities of digits which are contained within these repetition patterns, in that "2+4+3=9". Also, we can determine that this repetition pattern adds to a non-condensed sum of 1090, which condenses to the 1, with this condensed value of 1 maintaining the previously established condensed 1 sub-pattern which is displayed by the non-condensed sums of these repetition patterns.

Next, we will examine the quotient which is yielded by the eighth iteration of the function "1/3", which is shown below (with this function being equivalent to the function "1/6561"). (In this example, only one iteration of the repetition pattern is shown, due to spatial constraints.)

.00015241579027587258039932937052278616064624295076969974089315653101661332114007011263526901386983691510440481633897271757354061880810852004267642127724432251181222374638012498094802621551592745008382868465172991921963115378753238835543362292333485749123609205913732662703856119493979576284103033074226489864349946654473403444596860234720317024843773814967230605090687395214144185337600975461057765584514555707971345831428135954884926078341716201798506325255296448712086572168876695625666819082456942539247065996037189452827312909617436366407559823197683279987806736777930193568053650358177107148300563938424020728547477518670934308794391098917847889041304679164761469288218259411675049535131839658588629782045419905502210028959...

Above, we can see that this repetition pattern contains seven hundred and twenty-nine digits, with this quantity of seven hundred and twenty-nine maintaining the "X3" growth pattern which is displayed by the quantities of digits which are contained within these repetition patterns, in that "243X3=729". While this quantity of seven hundred and twenty-nine maintains the previously established condensed 9 sub-pattern which is displayed by the quantities of digits which are contained within these repetition patterns, in that "7+2+9=18(9)". Also, we can determine that this repetition pattern adds to a non-condensed sum of 3277, which condenses to the 1, with this condensed value of 1 maintaining the previously established condensed 1 sub-pattern which is displayed by the non-condensed sums of these repetition patterns.

Next, we will examine the quotient which is yielded by the ninth iteration of the function "1/3", which is shown below (with this function being equivalent to the function "1/19683"). (In this example, only one iteration of the repetition pattern is shown, in a slightly smaller font, due to spatial constraints.)

.00005080526342529086013310979017426205354874765025656658029771884367220444038002337042117563379566123050348016054463242391191180206269369506680892140425748107503937407915460041660316008738505309150027942894883909973073210384595844129451811207641111619163745364019712442209012853731646598587613676776914088299547833155514911344815322867449067723416145912716557435350302291317380480617792003251536859218615048519026571152771427119849616420261139054005995021084184321495706955240562922318752222730274856475130823553320123964842757709698724787888025199410658944266626022455926433978560178834527257023827668546461413402428491591728903114362647970329726159630137682263882538230960727531372250165117106132195295432606818066351674033429863333841385967586241934664431235075953868820809835898999136310521770055377737133567037545089671289945638368134938779657575245135396027028400142254737590814408372707412487933749936493420718386424833612762282172433064065437179291774627851445409744449524970786973530457755423461870649799319209470101102474216328811664888482446781486562007824010567494792460498907686836356246507138139511253365848701925519483818523599044861047604531829497535944723873393283544175176548290402885738962556520855560636081898084641568866534572981760910430320581212213585327439922775999593557892597673118935121678605903571610018797947467357618249250622364476959813036630594929634710155972158715642940608647055834984504394655286287659401513996850073667631966671747193009195752679977645684092872021541431692323324696438551033887110704669003708784230046232789717014682721129909058578468729360361733475588070924147741706040745821267083269826754051719758166946095615505766397398770512625107961184778743077782858304120306863791088756795203983132652542803434435807549662144998221815780114819895341157343900828125793832241020169689579840471472844586699182035258852817151856932378194380937865162830869278057206726616877508509881623736219072295889854188893969415231417974902199867906315094243763653914545546918660773256109332926891225931006452268455011939236904943352131280800690951582583955697810293146369963928262968043489305492048976273941980389168317837727988619620992734847330183407000965 3...

Above, we can see that this repetition pattern contains two thousand one hundred and eighty-seven digits, with this quantity of two thousand one hundred and eighty-seven maintaining the "X3" growth pattern which is displayed by the quantities of digits which are contained within these repetition patterns, in that "729X3=2187". While this quantity of two thousand one hundred and eighty-seven

maintains the previously established condensed 9 sub-pattern which is displayed by the quantities of digits which are contained within these repetition patterns, in that "2+1+8+7=18(9)". Also, we can determine that this repetition pattern adds to a non-condensed sum of 9838, which condenses to the 1, with this condensed value of 1 maintaining the previously established condensed 1 sub-pattern which is displayed by the non-condensed sums of these repetition patterns.

That completes the first section of this chapter, which involved an examination of the first cycle of nine iterations of the function "1/3". This cycle of nine is typical, in that most cycles involve a quantity which condenses to a member of the 3,6,9 family group, as will be seen in upcoming chapters, including "Chapter 6: Dividing by the 6". (While a representative sample of the second cycle of nine iterations of the function "1/3" will be examined in the third section of this chapter.)

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Next, we will examine all of the previously established sub-patterns which are displayed by this cycle of nine iterations of the function "1/3", as well as one other sub-pattern which we have not yet noted, all of which are shown and explained below. (The chart which is seen below involves an arbitrary color code which is explained below the chart.)

iteration	quantity of digits	non-condensed value	condensed value	alt. function
1	1	3	3	1/3 (none)
2	1	1	1	1/9
3	3	10	1	1/27
4	9	37	1	1/81
5	27	118	1	1/243
6	81	361	1	1/729
7	243	1090	1	1/2187
8	729	3277	1	1/6561
9	2187	9838	1	1/19683

Above, on the far-right side of the chart, we can see that the divisors which are involved in the alternate functions, all of which are highlighted in purple, display a simple "X3" growth pattern, in that each of these divisors is three times greater than the previous divisor. This is a simple and expected sub-pattern, one which will obviously continue on to infinite iterations. While to the left side of the chart, we can see that the quantities of digits which are contained within each of the repetition patterns, all except for the first of which are highlighted in red, also display an "X3" growth pattern, which is assumed to continue on to infinite iterations. Though it should be noted that the value which is yielded in relation to the first iteration of the function "1/3" is disregarded in relation to this sub-pattern, as will also be the case in relation to the next two of these sub-patterns. (This currently unexplained characteristic will also be displayed by a few of the sub-patterns which will be seen in upcoming chapters.) Next, to the right side of the chart, we can see that the condensed values of each of the repetition patterns, all except for the first of which are highlighted in green, display a sub-pattern which exclusively involves the 1. Then, in the center of the chart, we can see that the non-condensed values of each of the repetition patterns, all except for the first of which are highlighted in blue, display an interesting variation on an "X3" growth pattern which has not yet been noted, and which is explained below.

The non-condensed value of the first of these repetition patterns is 3, and the multiplication of this non-condensed value of 3 by the 3 yields a product of 9. Though the non-condensed value of the second of these repetition patterns is 1, which is 8 less than the assumed value of 9. Next, the multiplication of the non-condensed value of 1 by the 3 yields a product of 3. Though the non-condensed value of the third of these repetition patterns is 10, which is 7 greater than the assumed value of 3. Next, the multiplication of the non-condensed value of 10 by the 3 yields a product of 30. Though the non-condensed value of the fourth of these repetition patterns is 37, which is 7 greater than the assumed value of 30. Next, the multiplication of the non-condensed value of 37 by the 3 yields a product of 111. Though the non-condensed value of the fifth of these repetition patterns is 118, which is 7 greater than the assumed value of 111. Next, the multiplication of the non-condensed value of 118 by the 3 yields a product of 354. Though the non-condensed value of the sixth of these repetition pattern is 361, which is 7 greater than the assumed value of 354. These "+7" variations on an "X3" growth pattern continue on in this manner, and collectively yield the "X3" growth pattern variant which is shown below. (In the diagram which is shown below, the individual variations of "+7" are all highlighted in green. While as was mentioned a moment ago, this "X3" growth pattern variant lacks the involvement of the value which is yielded in relation to the first iteration of the function of "1/3".)

```
X3        3        - 8
|         1        +7
|        10        +7
|        37        +7
|       118        +7
|       361        +7
|      1090        +7
|      3277        +7
V      9838        +7
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The growth pattern which is seen above involves a variation on a basic "X3" growth pattern, and is therefore considered to be an "X3" growth pattern variant, one which involves a concurrent "+7" growth pattern which may or may not continue on to infinite iterations. (Either way, this combination of "+7" and "X3" is another example of the connection between the 7 and the 3,6,9 family group.)

That brings this section to a close. Though it should be noted at this point that the first cycle of nine iterations of the function "1/6" displays sub-patterns which are similar to those which were examined in this section, including another "X3" growth pattern variant, as will be seen in "Chapter 6: Dividing by the 6".

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Next, we will attempt to examine another cycle of nine iterations of the function "1/3". Though unfortunately, the infinitely repeating decimal number quotients which are yielded by the tenth through eighteenth iterations of the function "1/3" would be far too cumbersome for us to examine in this chapter. Therefore, we will just examine an eighty-one digit representative sample of the infinitely repeating decimal number quotient which is yielded by the tenth iteration of the function "1/3", which is shown below. (To clarify, the infinitely repeating decimal number quotient which is shown below is yielded by the tenth iteration of the function "1/3", which is equivalent to the function "1/59049".)

.0000169350878084302867110365967247540178495825500855221934325729478907348134 60007......

Above, we see a representative sample of the first iteration of the repetition pattern which is contained within the infinitely repeating decimal number quotient which is yielded by the tenth iteration of the function "1/3". This complete repetition pattern contains six thousand five hundred and sixty-one digits, with this quantity of six thousand five hundred and sixty-one maintaining the "X3" growth pattern which is displayed by the quantities of digits which are contained within these repetition patterns, in that "2187X3=6561". While this quantity of six thousand five hundred and sixty-one also maintains the previously established condensed 9 sub-pattern which is displayed by the quantities of digits which are contained within these repetition patterns, in that "6+5+6+1=18(9)". Though unfortunately, we will not be able to determine whether or not this repetition pattern maintains the previously established condensed 1 sub-pattern which is displayed by the non-condensed sums of these repetition patterns, as it would be prohibitively difficult to determine the sum which is yielded by the addition of the six thousand five hundred and sixty-one digits which are contained within this repetition pattern.

It should also be mentioned that the quantity of digits which are contained within the repetition pattern which is partially represented above, this being six thousand five hundred and sixty-one involves the product which is yielded by the function "81 squared", in that "81X81=6561", with 81 being the product which is yielded by the function "9 squared", in that "9X9=81". The multiple-digit number 6561 was seen earlier in this chapter as the divisor which is involved in the alternate function of the eighth iteration of the function "1/3", and will be seen again in an upcoming chapter, in relation to an unrelated function. Also, the divisor which is involved in the alternate function of the tenth iteration of 1/3, this being 59049, involves the product which is yielded by the function "243 squared", in that "243X243=59049", with 243 being the product which is yielded by the function "81X3". All of these somewhat irrelevant interrelations have to do with these quantities and multiple-digit numbers all having been yielded by various "X3" growth patterns, which means that all of these multiple-digit numbers are multiples of the 3.

(To clarify, the term "square" refers to a quantum mathematical concept which is similar to the traditional mathematical concept of a square. Though it should be noted that in terms of quantum mathematics, the act of squaring a number involves the multiplication of the quality of a number by a matching quantity. While the term "multiples" will be seen again in a few of the upcoming chapters, and also refers to a quantum mathematical concept which is similar to the traditional mathematical concept of a multiple.)

That brings this section, and therefore this chapter, to a close. Though the repetition patterns which are contained within the infinitely repeating decimal number quotients which are yielded by the first cycle of nine iterations of the function "1/3", the progressive patterns which are contained within these individual repetition patterns, and the many sub-patterns which are displayed by these individual progressive patterns will all be examined in "Chapter 3.3: Progressive Patterns", which is the first of the two sub-chapters of this parent chapter.