FIBONACCI NUMBERS, THE GOLDEN RATIO & THE PHYSICAL UNIVERSE

In the 12th century, GOD inspired a man named Leonardo Fibonacci to question what the population growth of rabbits would be like under ideal circumstances, such as no predators to eat them, or lack of food and water that would affect the growth rate. The results of this experiment are what is now known as The Fibonacci Sequence of Numbers or Fibonacci Numbers, and it goes like this.

Starting with 1, each new number in the series is simply the sum of the two before it.
So, you take "1" and add it to the previous number "zero" and you get "1". Then 1 +1 =2 etc. etc. Eventually you have a sequence of numbers that looks like this.

Fibonacci Sequence of Numbers

0
1
1
2
3
5
8
13
21
34
55
89
144
233
377
610
987
1597
2584
And so on & so on….

This sequence can continue on forever. As it turns out, Fibonacci numbers are one of Nature's numbering systems. Not only do they appear in population growth of rabbits, but everywhere in Nature. From the leaf arrangements in plants, all the way to structures in outer space.

Many flowers that are to Fibonacci numbers. Some display one pedal. Three pedals are more common like lilies and iris'. Some have 5 pedals such as buttercups, wild rose, larkspur, and columbines. Some have 8, 13, 21, 34, 55 and 89. All consecutive Fibonacci numbers. Even some fruit's seeds tend to Fibonacci Numbers.

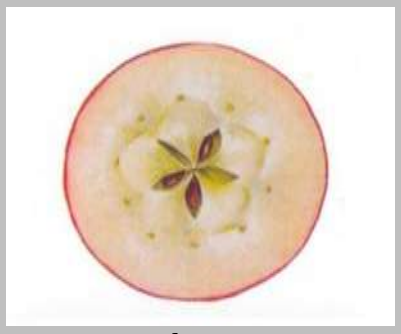

1 Pedal


3 pedals


5 pedals


13 pedals

21 pedals



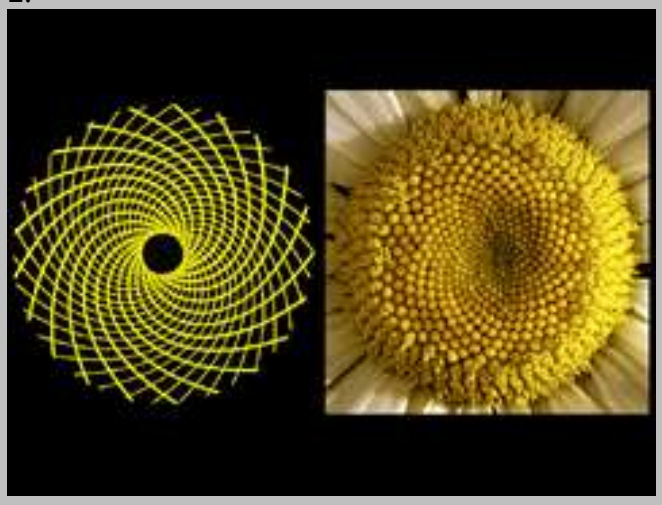
5 seeds

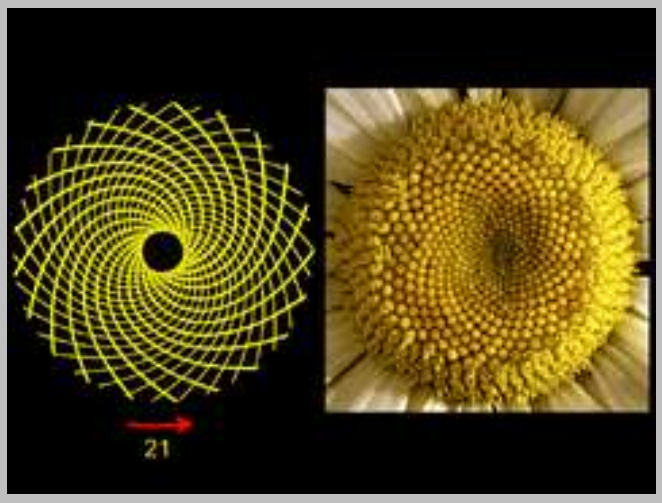
5 pedals & 8 pedals

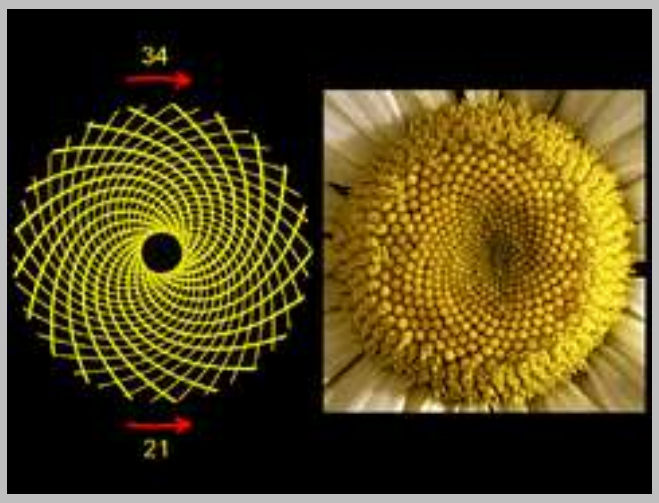
Here are consecutive Fibonacci numbers found in the bi-directional spiral growth pattern of seed in many plants.

1.

2.







Clearly, there is a direct correlation between the bi-directional spirals of the seed florets and Fibonacci Numbers.

More Examples

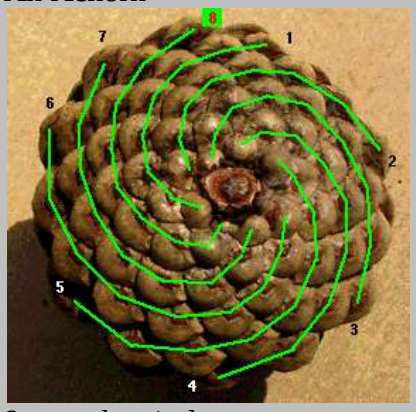

21 Spirals on direction


34 Spirals the other direction

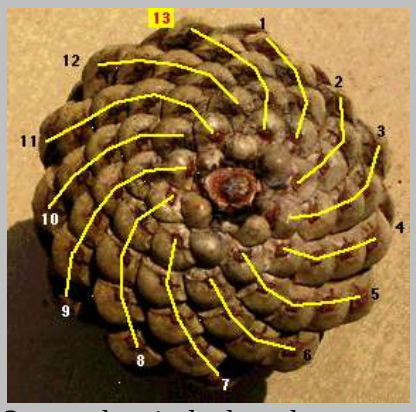

Bi-directional spirals

21 & 34 are consecutive Fibonacci numbers

An Achorn



8 growth spirals one way



13 growth spirals the other way

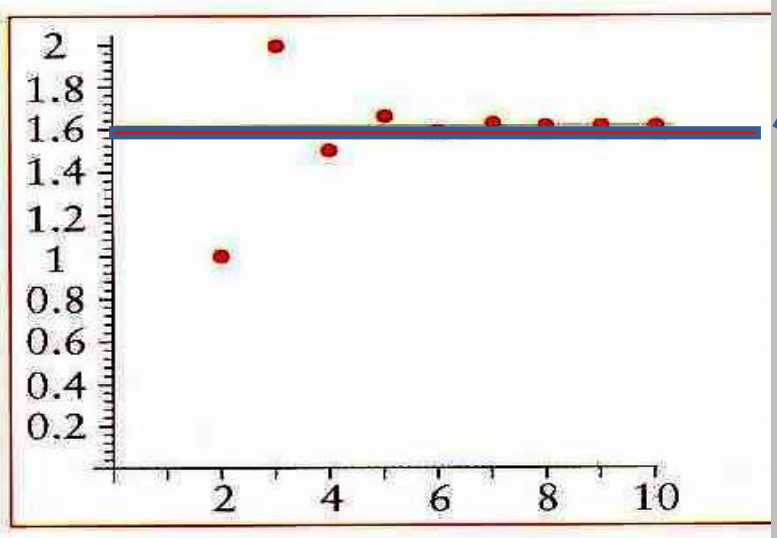

Bi-directional spirals

8 and 13 are consecutive Fibonacci numbers

Fibonacci Numbers are directly and intricately related to another very special math formula that is found all throughout life and the physical universe. This is the Golden Ratio or "Phi" *(as it is more commonly known).* It is an irrational number who's decimal place is never-ending, non-repeating and goes on forever and it looks like this.

1.61803398874989484820458683436563811772030917980 57.....

Although, scientists and academics alike have rounded it off to five decimal places.
So, for all intensive purposes the Golden Ratio (or Phi) is **1.61803.**



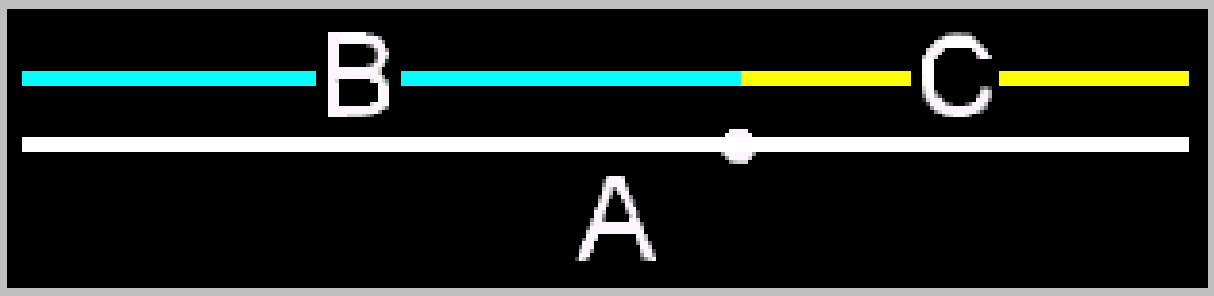
This graph shows how the sections of the Fibonacci Spiral approach Φ, the Divine Proportion, or 1.618....

1/1 = 1.000000	55/34 = 1.617647
2/1 = 2.000000	89/55 = 1.618182
3/2 = 1.500000	144/89 = 1.617978
5/3 = 1.666667	233/144 = 1.618056
8/5 = 1.600000	377/233 = 1.618026
13/8 = 1.625000	610/377 = 1.618037
21/13 = 1.615385	987/610 = 1.618033
34/21 = 1.619048	

How is the Golden Ratio related to Fibonacci numbers? If we were to divided each consecutive Fibonacci number, instead of adding. We find the results gradually converge on The Golden Ratio. *(see above diagrams).*

Okay, now if you look at the chart on the left. This red line represents the Golden ratio 1.61803. These dots represent the results of dividing two consecutive Fibonacci numbers .As you can see, the results gradually converge closer and closer to the Golden Ratio. The reason the result do not equal the Golden Ratio is because it is an irrational number (decimal goes on forever). Nothing can equal it; only tend to it.

For over 2000 years, humans have been in absolute awe about this very special math phenomena and the physical universe because it kept popping up in places that, at first, seemed unrelated. This phenomena is The Golden Ratio (or Golden Proportion, Golden Mean, Divine Proportion, Divine Ratio or Phi) and it is best explained visually.



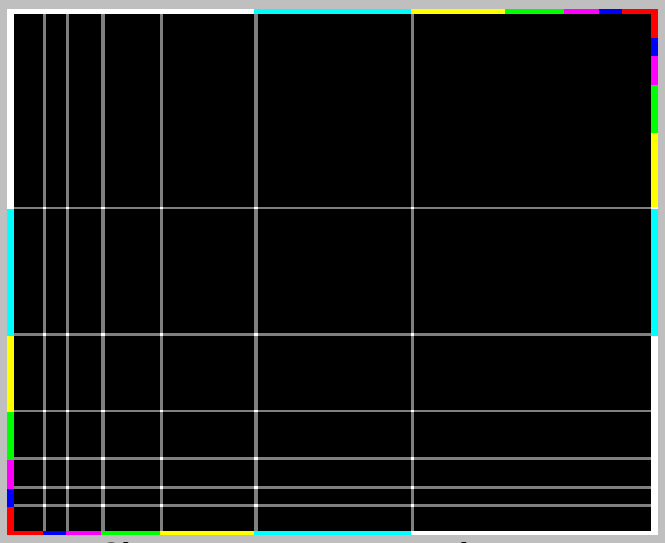
If you take a straight line “A” and split it in one very special place and only this place. We find that the whole or Line “A” is exactly 1.61803 times larger than line “B”. And line “B” is exactly 1.61803 times larger than line “C” .

So, the Golden Ratio is **A/B = B/C** or more simply… **A is to B, as B is to C.**

Now, if we take that same line above and keep growing (increasing) it to the Golden ratio we get a set of lines that are all 1.61803 times larger than the one before it *(see below)*.

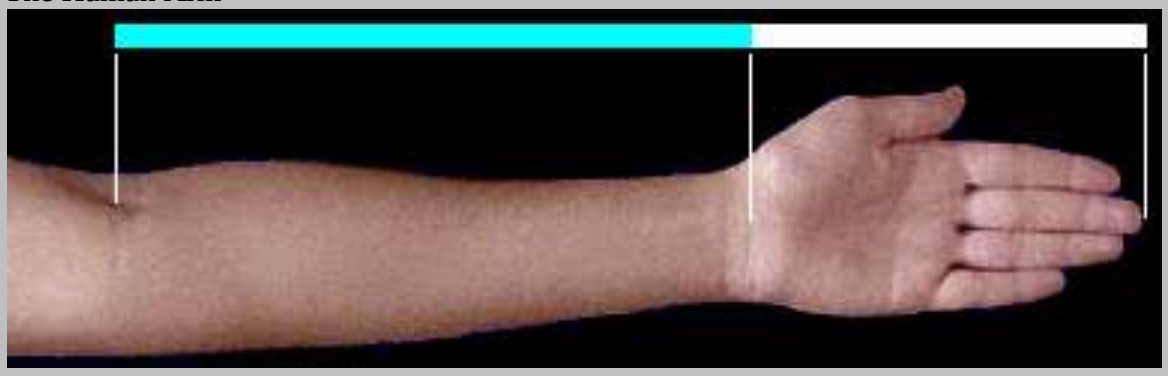
If we were to take these five (coloured) lines and squeezed or compressed them together into one line, we would get a sort-of measuring stick or “Golden Ruler” *(www.goldenumber.net)* that we can use to measure things in the universe to see if they are to the Golden Ratio (or Golden Proportion) or not.

We can even expand this Golden Ruler to a Golden Grid. Just factor in length and width. Now we can take surface area measurements.

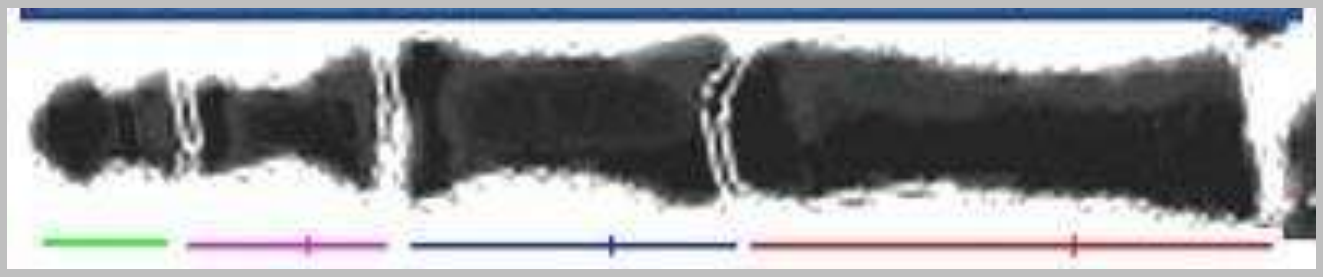


Okay. Lets start measuring things.

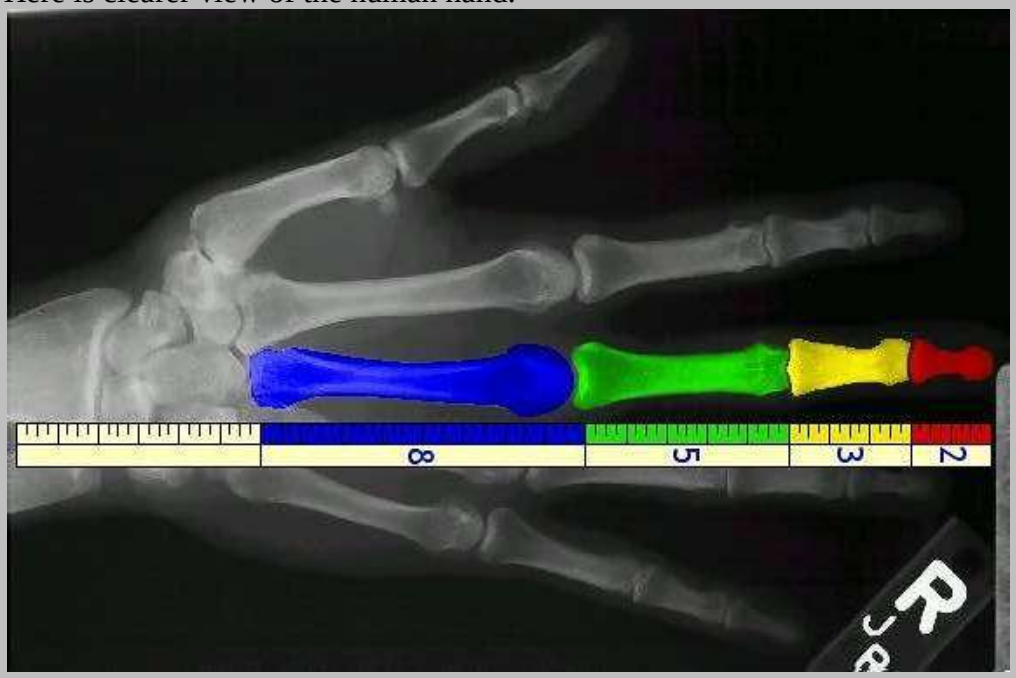
The Human Arm



The human finger it to the Golden Ratio. As you can see below. The Pink line is 1.61803 times larger than the Green line. The blue line is 1.61803 times larger than the Pink line and the Red line is 1.61803 times larger than the Blue line. Perfect Golden Proportion.

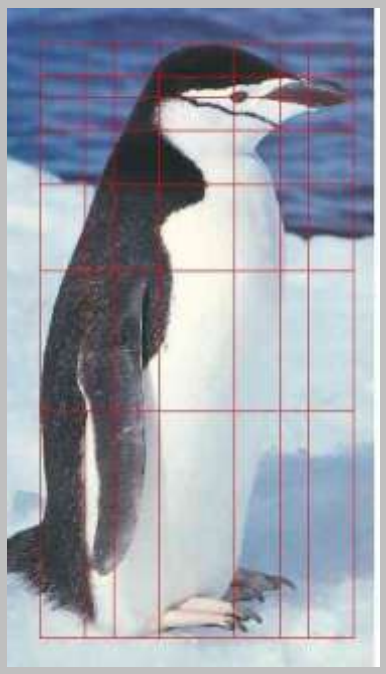


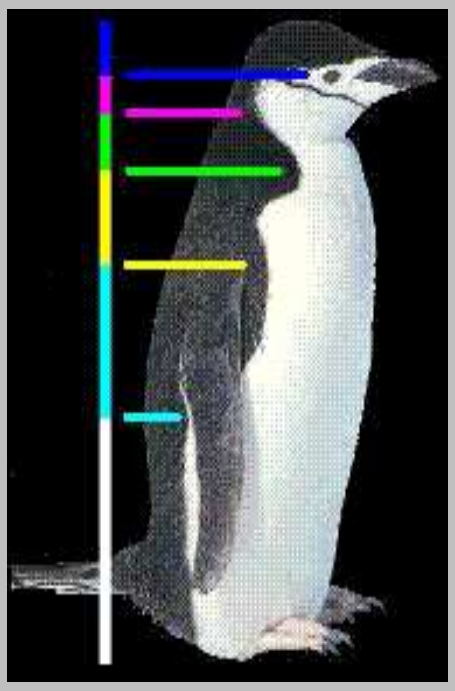
Here is clearer view of the human hand.



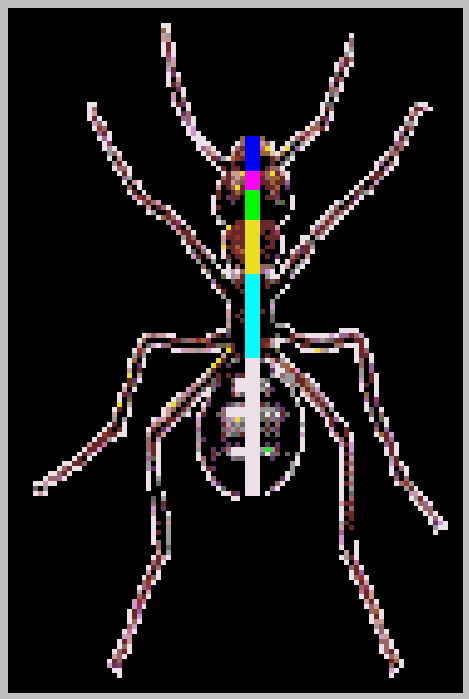
You can also see that when you put a ruler up to it, they are consecutive Fibonacci Numbers. The Fibonacci Numbers are not exact to the colors, but remember when we divide consecutive the results GRADUALLY converge on the Golden ratio *(see chart above for 3 divided by 5, 5 divided by 8 for results)*.

Here is a Penguin. Key body markings are to the Golden Ratio.

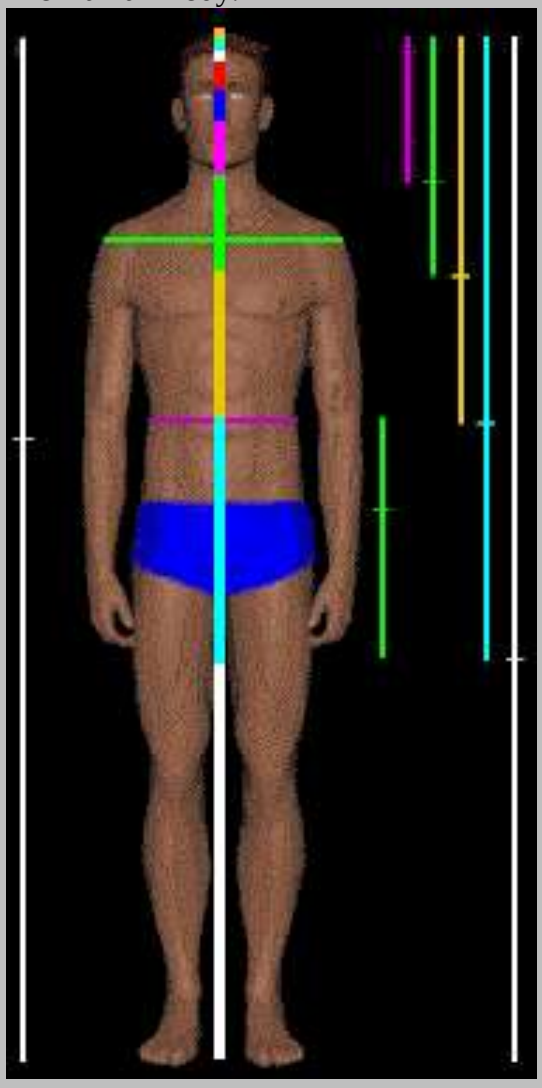




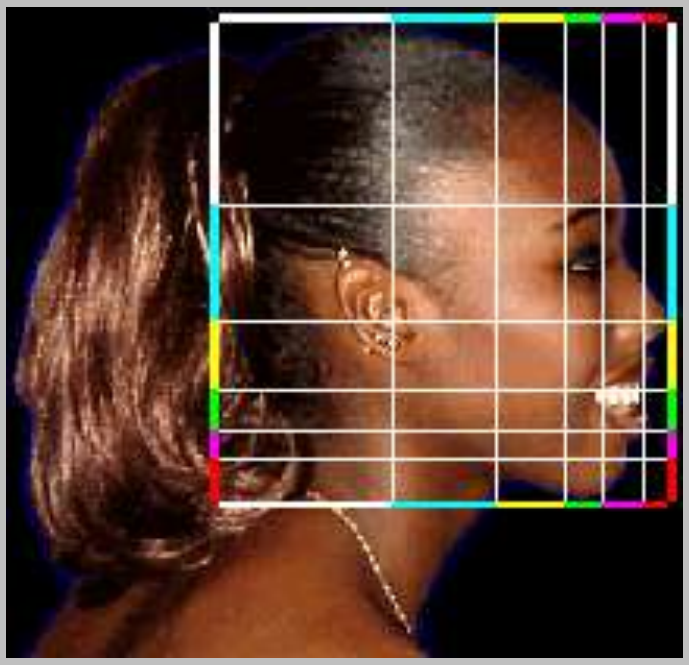
The Body sections of ants are to the Golden Ratio.



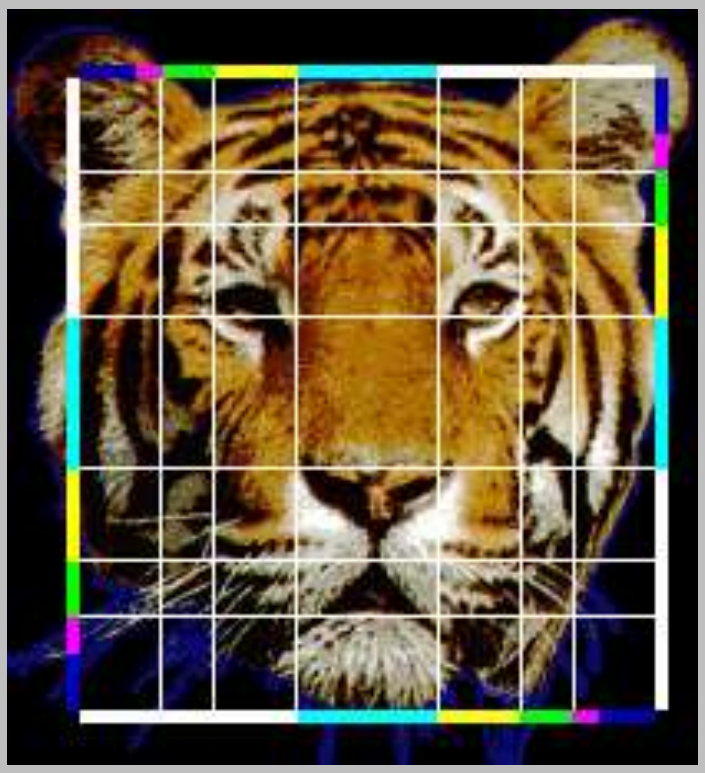
The Human Body.



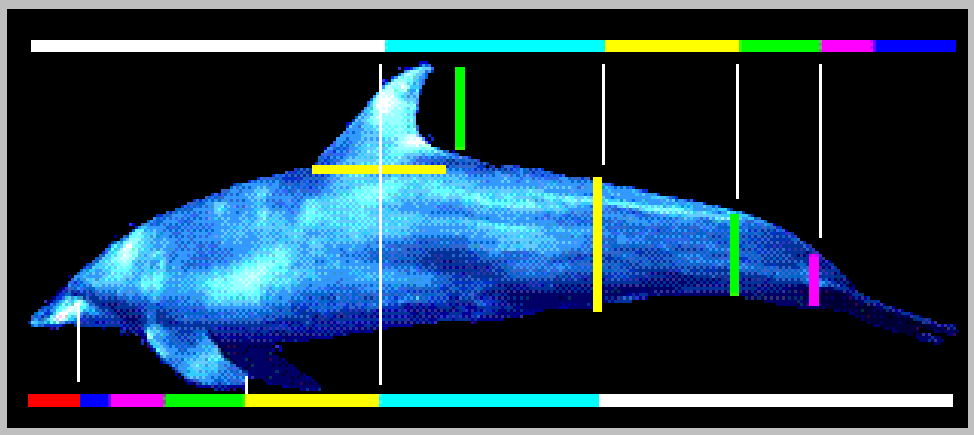
Key facial features are to the Golden Ratio.



Here is the face of a Tiger. Again, key facial features are to the Golden Ratio.

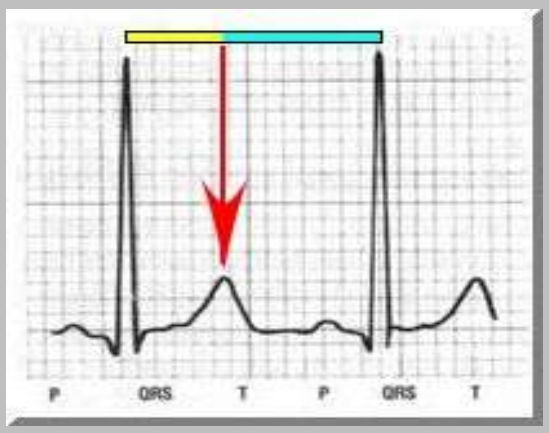


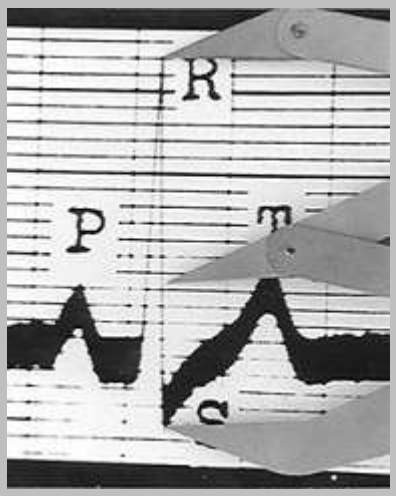
The eye, fins and tail all fall at golden sections of the length of a dolphin's body.



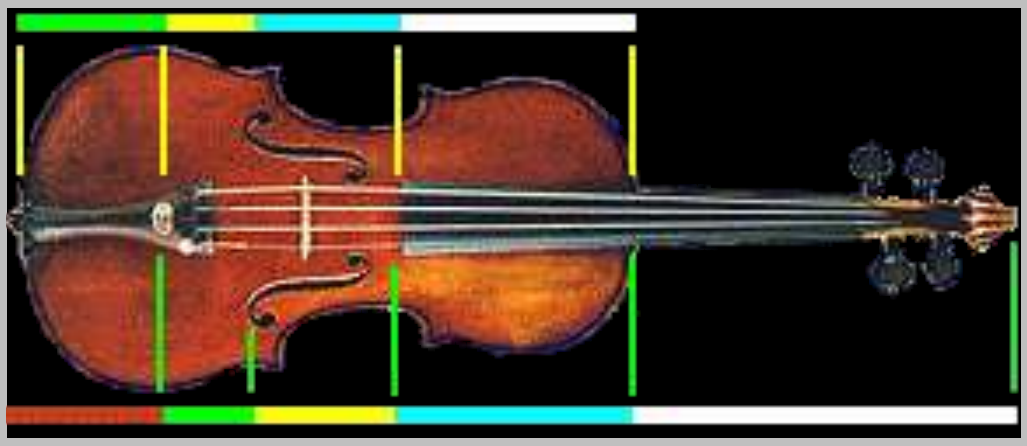
I would like to bring your attention to fact that the Golden ruler has to be reversed of "**flipped**" in order to observe the Golden ratio on opposite sides of a living organism *(belly side vs. back side)*. This is common with many life forms.

When looking at an electrocardiogram (ECG or EKG), it is said by some that a heartbeat at rest beats in a Golden Ratio rhythm. While this is an area that still needs research and scientific corroboration, it is an interesting perspective on yet another potential appearance of the Golden Ratio in life.





Here is a musical instrument. A violin.



Over the centuries, it has been designed by trial and error, without the aid of computers. What is interesting is that it was not made to the Golden Ratio intentionally. What the designers found was that the closer the design was to the Golden Ratio, the better the quality of sound. It appears that even sound waves and harmonics tend to the Golden Ratio.

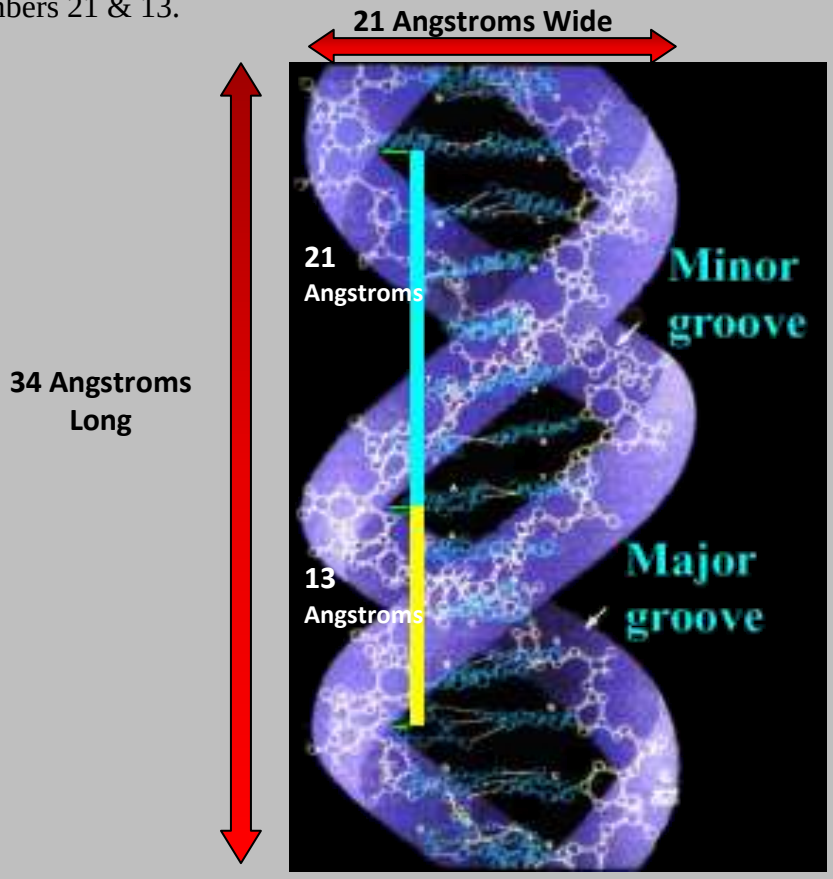
Just on a side note. The Composer Mozart divided a huge number of his sonatas into two parts whose lengths reflect the Golden Ratio. Although there is much debate about whether he was conscious of this or not.

It seems as though we are hard-wired in some way to this Golden Ratio.

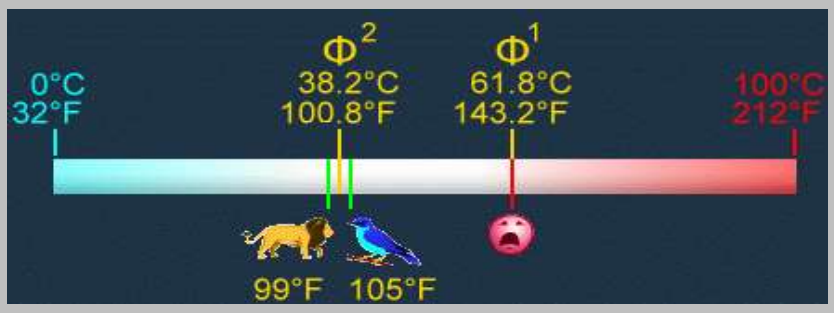
The Rings of Saturn are to the Golden Ratio.

Now, the one common thing that all life has in common is DNA. Instead of centimeters or inches, Angstroms are the unit of measure used for DNA. Here is a full segment of a DNA. It is roughly 21 angstroms wide & 34 angstroms long for each full cycle of its double helix spiral. 21 & 34 are consecutive Fibonacci Numbers…..

But wait….there is more….if you look at the two grooves created by the twisting of the double helix strand. It creates a major groove and minor groove that is to the Golden Proportion. By now you probably won't be surprised, but the major grooves and minor groves that created form twisting the DNA strand are consecutive Fibonacci numbers 21 & 13.



BODY TEMPERATURES: Body temperatures and sterilization points fall near the phi (Golden Ratio) points between freezing and boiling



Body temperatures vary, even within humans. The body temperatures of mammals range from around 97° to over 103° Fahrenheit. Birds have average temperatures of around 105° Fahrenheit.

The phi (Golden Ratio) point between the freezing temperature (32° F) and the boiling temperature (212° F) of water is 100.8° F, or 38.2° Centigrade.

Take the phi (Golden Ratio) point from the other end of the scale of temperature and you arrive at 143°, which is about the temperature required to kill bacteria. (Generally rounded and stated as 140° in most literature.)

Interestingly enough, if you take the phi (Golden Ratio) point of 37 degrees centigrade, which is the average human body temperature, you get 23 degrees centigrade or 73 degrees Fahrenheit, a "room" temperature that many would consider to be just about perfect for indoor comfort and outdoor enjoyment.

Water has a very unusual property in that it reaches maximum density in the liquid state at 4° C, instead of in the solid state. This allows ice to float, which is vital to sustaining life beneath its surface in cold climates. The kilogram is defined as the mass of water filling one liter at 4° C. If this critical temperature is regarded instead of 0° C, we find that the phi (Golden Ratio) point is 105.2° F, and this defines the upper end of body temperatures.

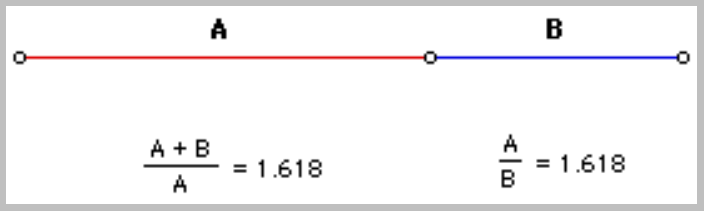
Thus even key temperatures for body heat and comfort reflect the phi (Golden Ratio) points in the property of water, of which we largely consist!

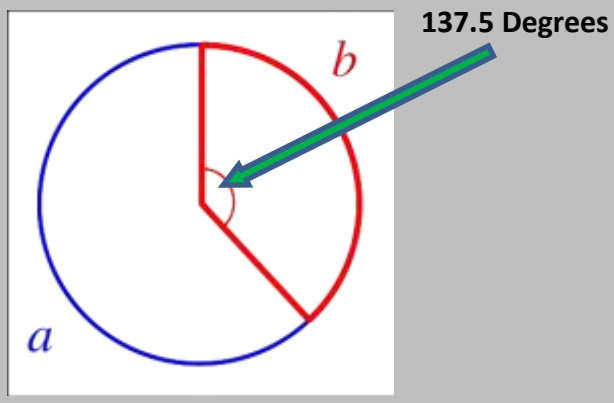
Description of key temperature point	Fahrenheit	Centigrade
Freezing point of water	32°	0°
Middle of range of typical body temperatures of mammals	100.6°	38.1°
Phi point 2 (down from water's boiling point to freezing	100.8°	38.2°
Average body temperature of birds	105°	40°
Phi point 2 (down from water's boiling point to maximum density)	105.2°	40.7°
Phi point 1 (sterilization point) (up from water's freezing point to boiling)	143.2°	61.8°
Boiling point of water	212°	100°

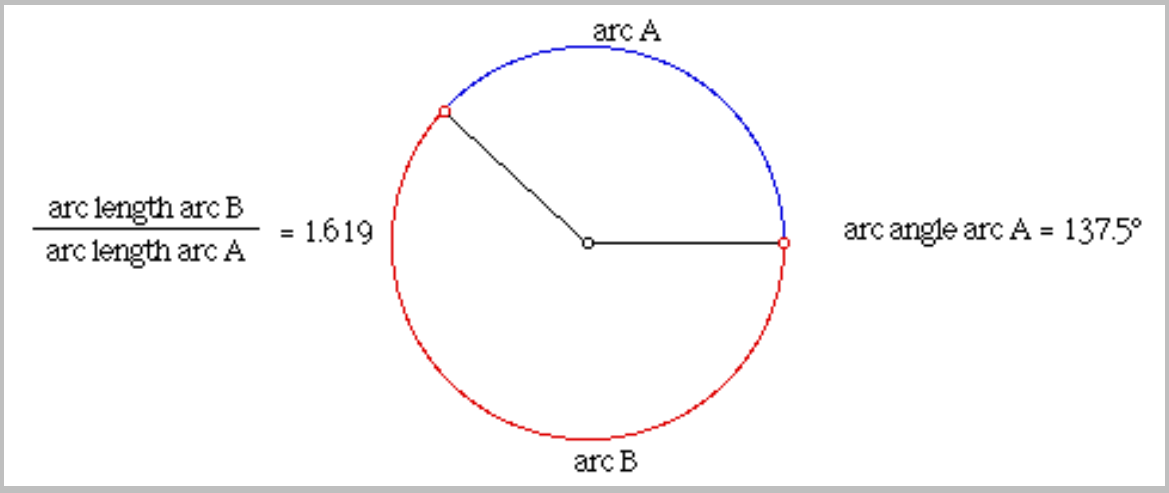
Average Body Temperatures		
Animal	Fahrenheit	Centigrade
Elephants	97.7	36.5
Humans	98.6	37.0
Whales	98.6	37.0
Bat	98.6	37.0
Horse	100.4	38.0
Seal	100.4	38.0
Baboon	100.6	38.1
Rabbits	101.0	38.3
Cows	101.5	38.6
Dogs	102.0	38.9
Cats	102.2	39.0
Goats	103.4	39.7
Midpoint of extremes	100.6	38.1

Golden Angle:

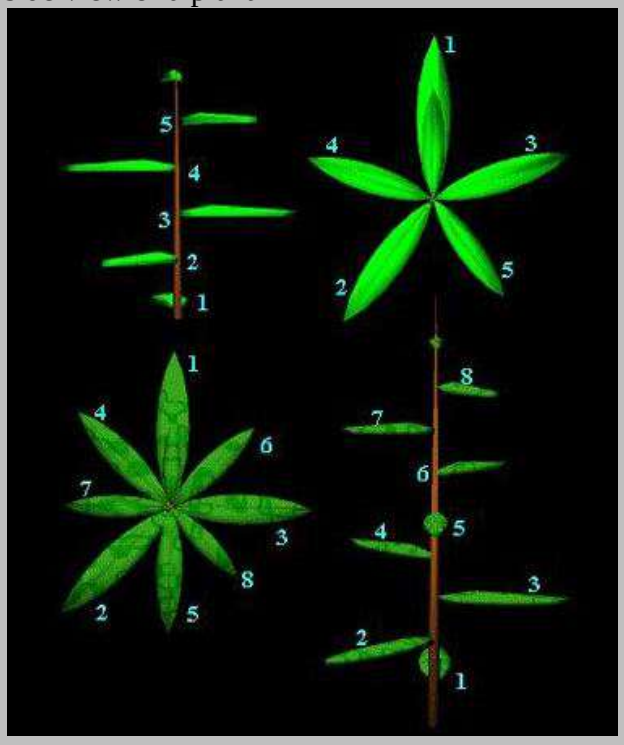
If we take a line that is split in Golden Proportion and grabbed the ends of it with our hands and bent in arount into a circle we would get a circle whose circumference is split to the golden Ratio. From this we can find the "Golden Angle", which is 137.5 degrees.







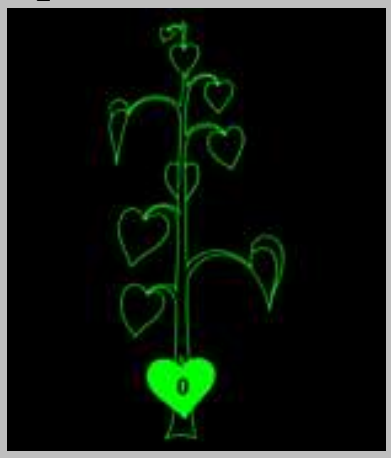
We find that many plants, trees and flowers (not all) tend to branch to the Golden Angle. In other words, for every 137.5 degree turn a new leaf or branch forms. Here is a top & side view of a plant



Even the number of leaves tend to Fibonacci numbers.

1

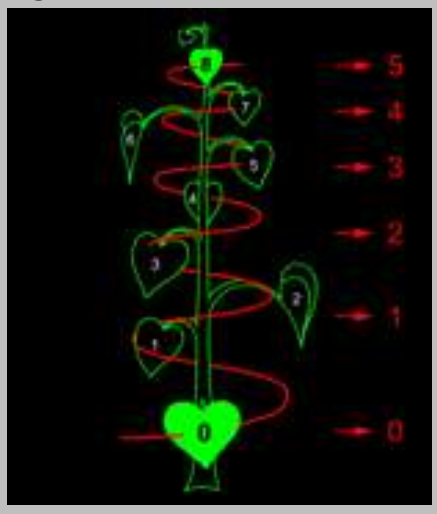
2



3

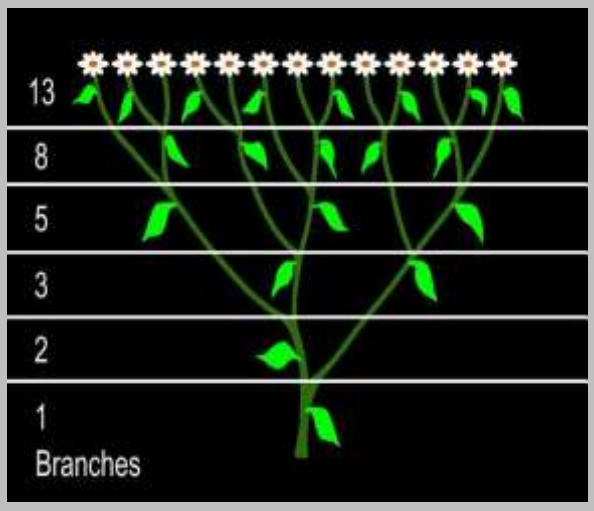
4

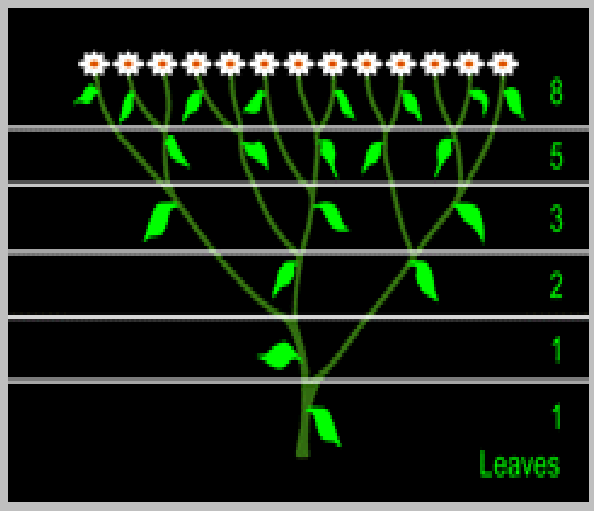
5



After 5 revolutions there are 8 leaves. 5 and 8 are consecutive Fibonacci Numbers and we already know that when you divide consecutive Fibonacci Numbers the results converge on the Golden Ratio. The larger the Fibonacci Number the closer the results are to the Golden Ratio.

We also find that the number of branching tends to Fibonacci Numbers.





This is another example of how Fibonacci Numbers are directly and intricately linked to the Golden Ratio. In this case, the Golden Angle.

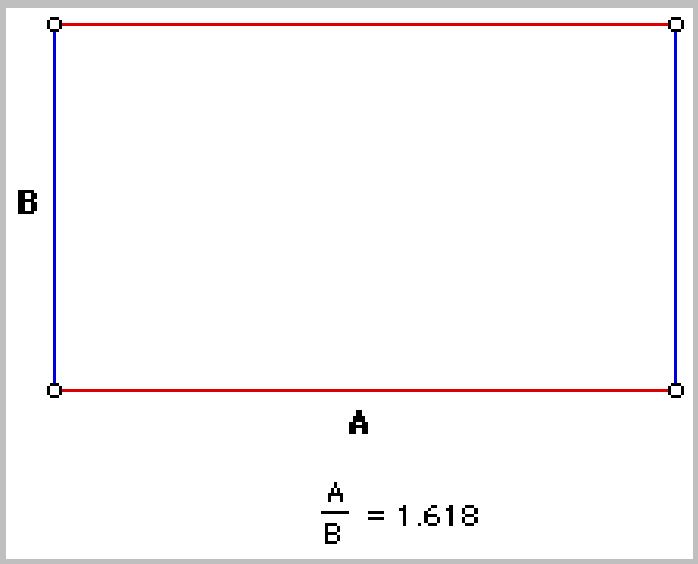
There are critics who say that the Golden Ratio is not found in everything. Now, we know the Fibonacci Sequence is directly linked to the Golden Ratio and The Fibonacci Sequence was based on Population growth under PERFECT conditions. In other words, NO EXTERNAL or ENVIRONMENTAL FACTORS THAT WOULD INFLUENCE the rate of population growth.

Obviously, this not the way it really is in Nature. Thus, we will not find this pattern in everything because external or environmental factors change the way things grow. Here are some pictures from northern Canada.

As you can see. These trees have completely changed the way they grow to because of a constant wind blowing from one direction. The tree could not grow normally. Hence, we are not going to find the Golden Ratio here. We can't. Ideal conditions are not present. But that is not to say that the Golden Ratio was not present in the early stages of growth.

The Golden Rectangle

If were to make a rectangle whose length and width are in Golden Proportion, we get a Golden Rectangle.



Now, we can also make more Golden Rectangles or nested Golden Rectangles.

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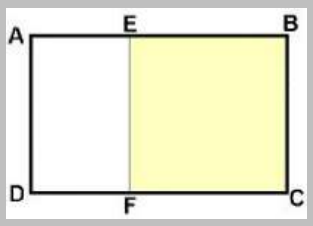
2)



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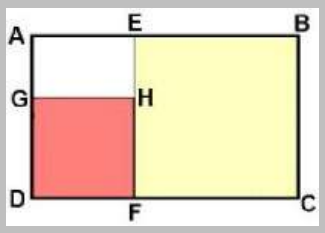

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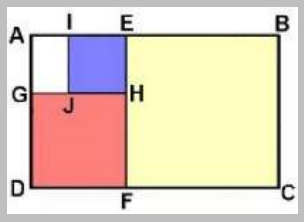

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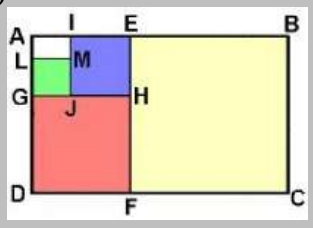
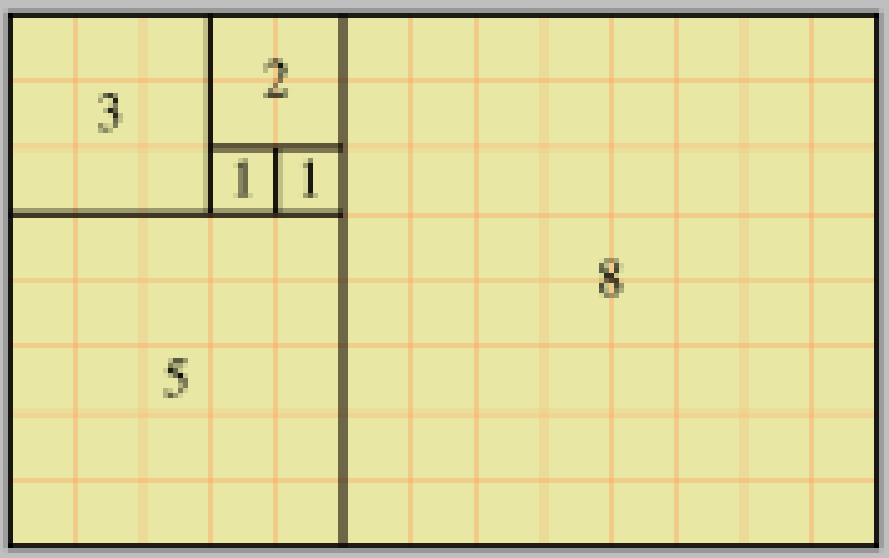
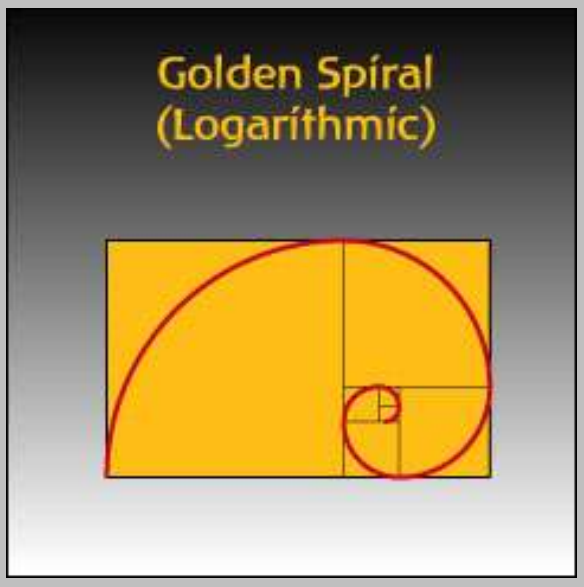


What is even more interesting is that we can create a Golden Rectangle from Fibonacci Numbers too. Just square each Fibonacci Number

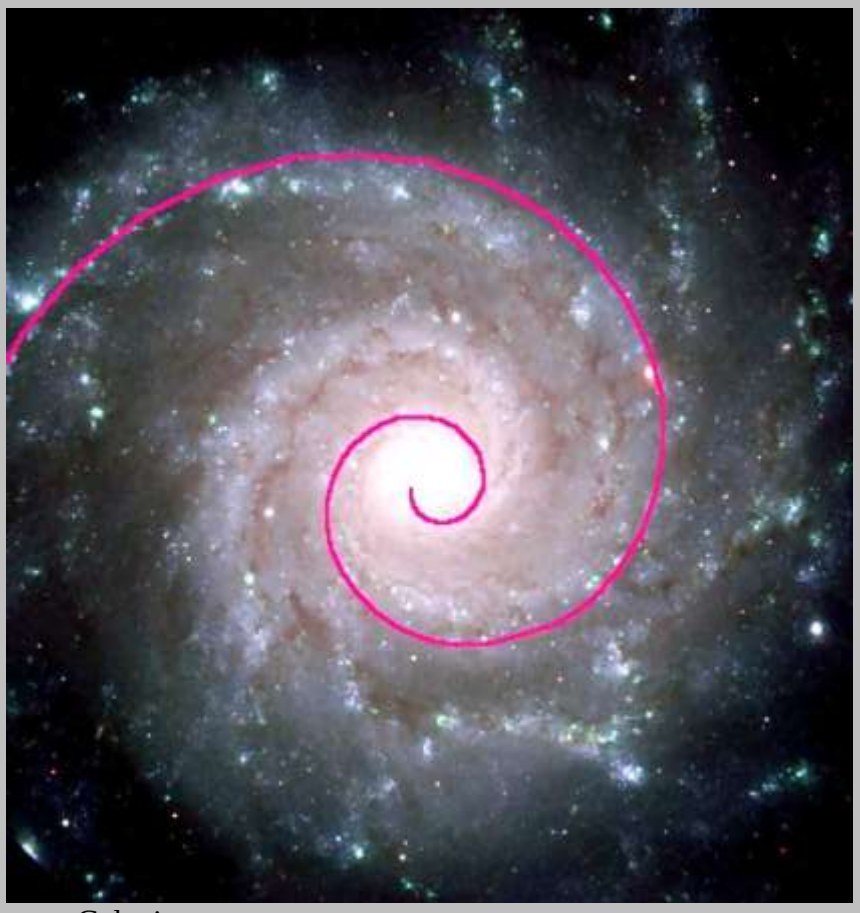


Yet another example of how Fibonacci Numbers are directly & intricately related to the Golden Ratio. In this case, the Golden Rectangle.

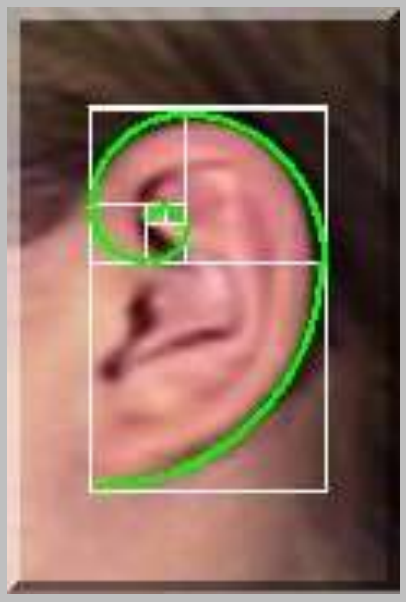
If we were to draw a line connecting all the consecutive Fibonacci numbers in the picture above, another very special shape emerges……The Golden Spiral.



Where can find this in the physical universe?



Galaxies

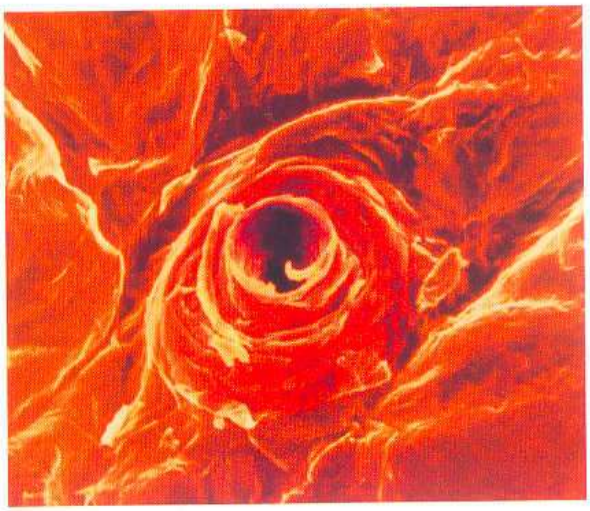


Human Ear

An oxygyrus, a free-floating oceanic snail

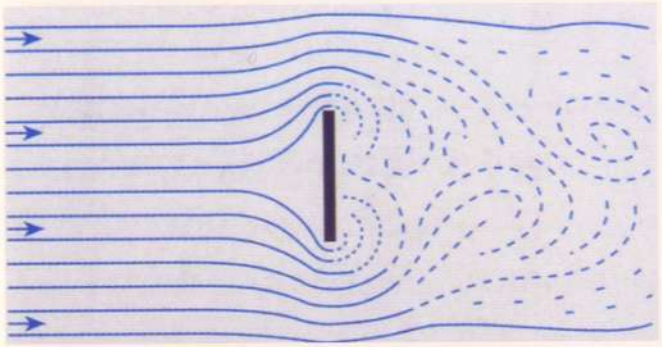
Hurricane Bonnie approached the eastern seaboard of the United States on August 25, 1998—a towering mass of spiraling cloud twice as tall as Mount Everest, unusually high for an Atlantic storm.

The cochlea of the human inner ear, the organ responsible for hearing

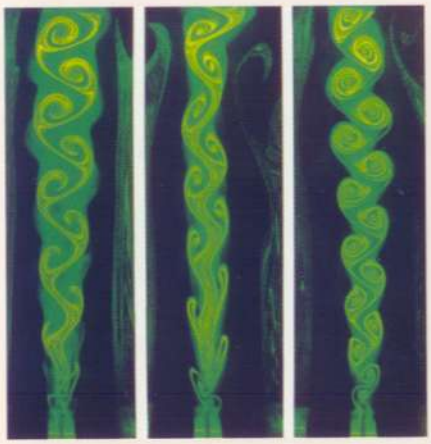


An empty hair follicle shows the shape of a spiral. Except for the palms of the hands and the soles of the feet, all areas of the human skin contain similar follicles from which all our hair grows. Individual hairs last about seven years before being shed and replaced by a new hair growing from the same follicle.

Nature's Spirals of Flow



This diagram shows how liquids (including air) form into spirals when met by an obstacle.



One of the aspects of irregular flow, or turbulence, is that although the patterns are not predictable, there is a certain regularity. These images show the patterns that are formed by changing the speed of two streams of air—one is shown in black and the other in green. Turbulence occurs when the two streams come into contact with each other, and the spiraling pattern is determined by the difference in their speed.

This space shuttle photograph, taken near the island of Guadeloupe in the Caribbean Sea, shows swirling cloud formations in an atmospheric phenomenon known as a Von Karman vortex street. The long line of eddies that rotate alternately clockwise and counterclockwise is caused by obstacles, such as islands, disturbing the airflow as it passes over them. Von Karman vortex streets are often seen in satellite images of clouds.

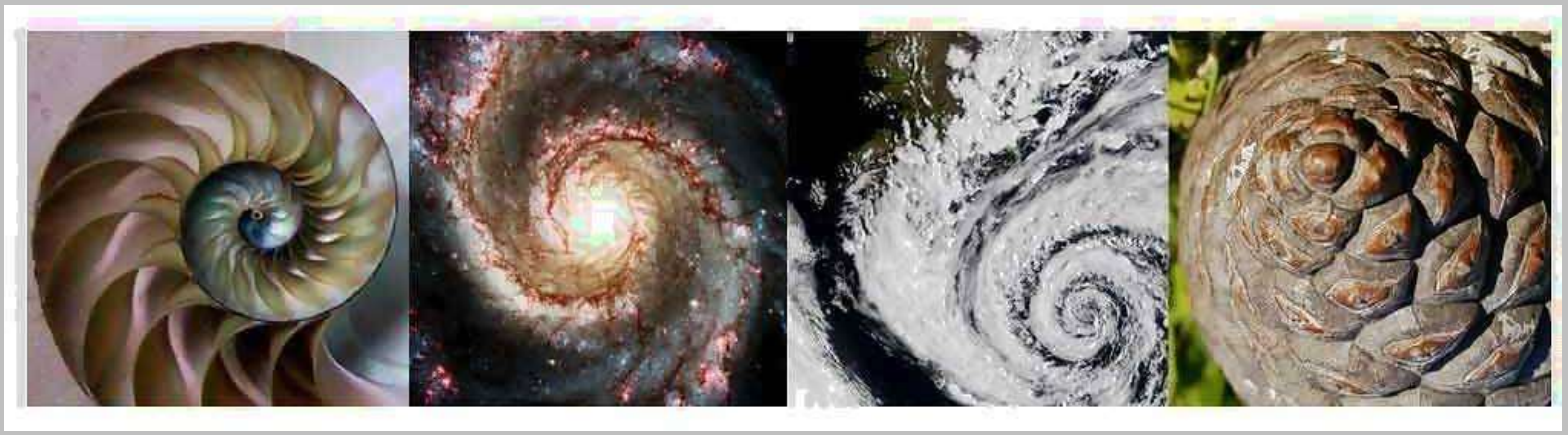
Two galaxies are colliding 430 million light years away.

FLOWER

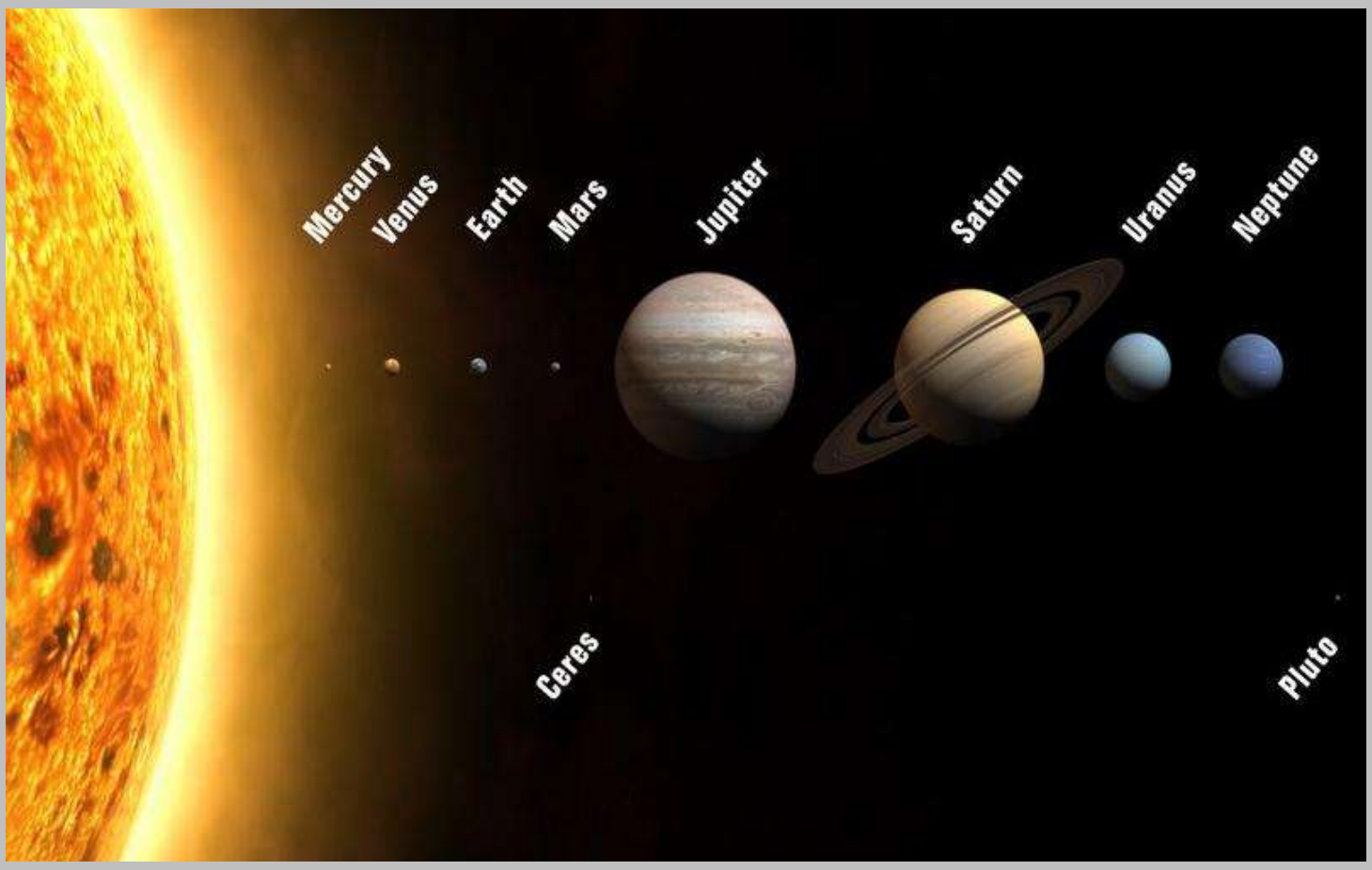
SNAIL

The NAUTILUS

It does not matter what scale of the universe you observe, the Golden Ratio is found all throughout the physical universe.



<u>Our Solar System:</u> **Relative planetary distances:** *(Picture is NOT to scale)*



Usually when we measure the orbital distance of planets, we are measuring the distance from us on earth. However, earth is not the first planet in our solar system, Mercury is. So, to take measurements from earth would be like starting the Fibonacci sequence from somewhere in the middle of the sequence *(ie: 5 or 8)*. Now, if we were to start measuring from the first planet in our solar system, Mercury. Something very special begins to unfold.

Please note: The asteroid belt is part of our solar system and the largest asteroid is Ceres, which is 1/3 the total mass of all the asteroids. So, Ceres was the logical orbit to use.

If you take the average of the mean planet orbital distances of each successive planet in relation to the one before it…….

Planet	Mean distance in million kilometers as per NASA	Relative mean distance where Mercury=1
Mercury	57.91	1.00000
Venus	108.21	1.86859
Earth	149.60	1.38250
Mars	227.92	1.52353
Ceres	413.79	1.81552
Jupiter	778.57	1.88154
Saturn	1,433.53	1.84123
Uranus	2,872.46	2.00377
Neptune	4,495.06	1.56488
Pluto	5,869.66	1.30580
Total		16.18736
Average		1.61874
Golden Ratio		1.61803
Degree of variance		(0.00043)

We find the degree of **variance is only 0.00043** off from the Golden Ratio 1.61803. You can't get much closer than that!!

RECAP

- **Golden Ratio: A/B = B/C or A is to B, as B is to C**
- **Golden Ratio expressed numerically is 1.61803**
- **When you divide consecutive Fibonacci Numbers the results converge on the Golden Ratio.**
- **Fibonacci Numbers & the Golden Ratio are directly and intricately related to each other and the physical universe.**

THE MATH

Is there a common factor in the Fibonacci Sequence? It was discovered in the 1960's that the Periodic Table of Elements *(building blocks of everything)* are numerical structured based on the number "19". The Golden Ratio (& Fibonacci Numbers) relates to growth and creation of life and physical structures in our universe. In other words. The elements are the building blocks of all things and the Golden Ratio/Fibonacci Numbers is HOW these blocks come together. So, if the Periodic Table of Elements is government by 19. So, should the Fibonacci sequence. I took as many Fibonacci sequences as I could on Microsoft Excel (which was 74).

	Fibonacci	Divide
Order	Numbers	By 19 Results
1	0	0.0
2	1	0.1
3	1	0.1
4	2	0.1
5	3	0.2
6	5	0.3
7	8	0.4
8	13	0.7
9	21	1.1
10	34	1.8
11	55	2.9
12	89	4.7
13	144	7.6
14	233	12.3
15	377	19.8
16	610	32.1
17	987	51.9
18	1597	84.1
19	2584	136.0
20	4181	220.1

21	6765	356.1
22	10946	576.1
23	17711	932.2
24	28657	1508.3
25	46368	2440.4
26	75025	3948.7
27	121393	6389.1
28	196418	10337.8
29	317811	16726.9
30	514229	27064.7
31	832040	43791.6
32	1346269	70856.3
33	2178309	114647.8
34	3524578	185504.1
35	5702887	300151.9
36	9227465	485656.1
37	14930352	785808.0
38	24157817	1271464.1
39	39088169	2057272.1
40	63245986	3328736.1
41	102334155	5386008.2
42	165580141	8714744.3
43	267914296	14100752.4
44	433494437	22815496.7
45	701408733	36916249.1
46	1134903170	59731745.8
47	1836311903	96647994.9
48	2971215073	156379740.7
49	4807526976	253027735.6
50	7778742049	409407476.3
51	12586269025	662435211.8
52	20365011074	1071842688.1
53	32951280099	1734277899.9
54	53316291173	2806120588.1
55	86267571272	4540398488.0
56	139583862445	7346519076.1
57	225851433717	11886917564.1

58	365435296162	19233436640.1
59	591286729879	31120354204.2
60	956722026041	50353790844.3
61	1548008755920	81474145048.4
62	2504730781961	131827935892.7
63	4052739537881	213302080941.1
64	6557470319842	345130016833.8
65	10610209857723	558432097774.9
66	17167680177565	903562114608.7
67	27777890035288	1461994212383.6
68	44945570212853	2365556326992.3
69	72723460248141	3827550539375.8
70	117669030460994	6193106866368.1
71	190392490709135	10020657405743.9
72	308061521170129	16213764272112.1
73	498454011879264	26234421677856.0
74	806515533049393	42448185949968.1

Clearly, 19 was not the Common Denominator of the Fibonacci Sequence. However, I did notice that the 19th Fibonacci Sequence (2584) was divisible by 19 and the digits (2+5+8+4) also equal 19. I found this very interesting. So, I decided to look further.

Since, the first Fibonacci sequence to divide by 19 was, in fact, the 19th Fibonacci sequence, this seemed like a good place to start. I wanted to know **how far off** the other Fibonacci numbers were from being a multiple of 19. What was discovered was something extraordinary.

Chart 2

Numerical Order	Fibonacci Numbers			Result	Divide By 19
1	0	Add	2584	2584	136
2	1	SUBTRACT	1597	-1596	-84
3	1	ADD	987	988	52
4	2	SUBTRACT	610	-608	-32
5	3	ADD	377	380	20
6	5	SUBTRACT	233	-228	-12
7	8	ADD	144	152	8
8	13	SUBTRACT	89	-76	-4
9	21	ADD	55	76	4

10	34	SUBTRACT	34	0	0
11	55	ADD	21	76	4
12	89	SUBTRACT	13	76	4
13	144	ADD	8	152	8
14	233	SUBTRACT	5	228	12
15	377	ADD	3	380	20
16	610	SUBTRACT	2	608	32
17	987	ADD	1	988	52
18	1597	SUBTRACT	1	1596	84
19	2584	Add	0	2584	136

I realized quickly that the numbers needed to make them divisible by 19, turned out to be the very same 19 Fibonacci numbers in **reverse** (or flipped). I was astonished. It is the same phenomena as the Golden Ratio in living organisms *(ie: Dolphin picture).* It had to be flipped. I tried other factors, but 19 was across the board. Now, I had to be sure this wasn't just some math trick. So, I tried this "Fibonacci Flip" formula with the first 18, 17, 20 sequences etc instead of the 19th sequence, but it did not work. It **had to be** the first **19** Fibonacci numbers flipped for a common denominator (factor) to be found, and it happened to be the number 19. I found this remarkable because the Fibonacci Sequence is generated by added each new number in the series to the number before it. They are all sums. They are not multiples of anything, yet we still find a common denominator.

However, I still wasn't convinced that this was not a coincidence. So, I decided to see what would happen if I continued the sequence *(chart 3)*. Would it still be divisible by 19? What are the odds?

Chart 3:

Numerical Order	Fibonacci Numbers	Calculation	Flipped Fibonacci No.	Result	Divide By 19
1	0	ADD	2584	2584	136
2	1	SUBTRACT	1597	-1596	-84
3	1	ADD	987	988	52
4	2	SUBTRACT	610	-608	-32
5	3	ADD	377	380	20
6	5	SUBTRACT	233	-228	-12
7	8	ADD	144	152	8
8	13	SUBTRACT	89	-76	-4
9	21	ADD	55	76	4
10	34	SUBTRACT	34	0	0
11	55	ADD	21	76	4
12	89	SUBTRACT	13	76	4

13	144	ADD	8	152	8
14	233	SUBTRACT	5	228	12
15	377	ADD	3	380	20
16	610	SUBTRACT	2	608	32
17	987	ADD	1	988	52
18	1597	SUBTRACT	1	1596	84
19	2584	ADD	0	2584	136
20	4181	SUBTRACT	1	4180	220
21	6765	SUBTRACT	1	6764	356
22	10946	SUBTRACT	2	10944	576
23	17711	SUBTRACT	3	17708	932

It appears that the formula still works. However, it is interesting to note that after the 19th Fibonacci sequence the calculation is always "subtract". Now, let's see how far these numbers go……

Fibonacci Numbers	Calculation	Flipped Fibonacci No.	Result	Divide By 19
0	ADD	2584	2584	136.0
1	SUBTRACT	1597	-1596	-84.0
1	ADD	987	988	52.0
2	SUBTRACT	610	-608	-32.0
3	ADD	377	380	20.0
5	SUBTRACT	233	-228	-12.0
8	ADD	144	152	8.0
13	SUBTRACT	89	-76	-4.0
21	ADD	55	76	4.0
34	SUBTRACT	34	0	0.0
55	ADD	21	76	4.0
89	SUBTRACT	13	76	4.0
144	ADD	8	152	8.0
233	SUBTRACT	5	228	12.0
377	ADD	3	380	20.0
610	SUBTRACT	2	608	32.0
987	ADD	1	988	52.0
1597	SUBTRACT	1	1596	84.0
2584	ADD	0	2584	136.0

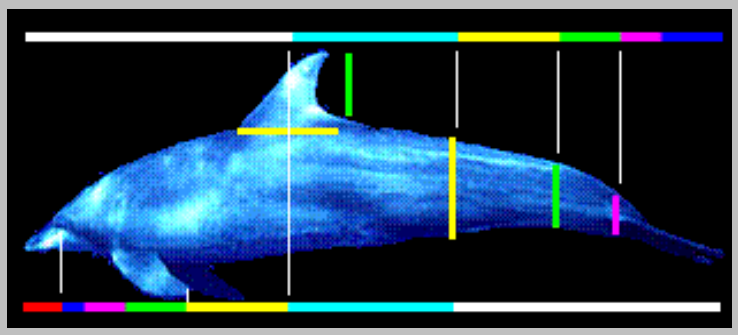
4181	SUBTRACT	1	4180	220.0
6765	SUBTRACT	1	6764	356.0
10946	SUBTRACT	2	10944	576.0
17711	SUBTRACT	3	17708	932.0
28657	SUBTRACT	5	28652	1508.0
46368	SUBTRACT	8	46360	2440.0
75025	SUBTRACT	13	75012	3948.0
121393	SUBTRACT	21	121372	6388.0
196418	SUBTRACT	34	196384	10336.0
317811	SUBTRACT	55	317756	16724.0
514229	SUBTRACT	89	514140	27060.0
832040	SUBTRACT	144	831896	43784.0
1346269	SUBTRACT	233	1346036	70844.0
2178309	SUBTRACT	377	2177932	114628.0
3524578	SUBTRACT	610	3523968	185472.0
5702887	SUBTRACT	987	5701900	300100.0
9227465	SUBTRACT	1597	9225868	485572.0
14930352	SUBTRACT	2584	14927768	785672.0
24157817	SUBTRACT	4181	24153636	1271244.0
39088169	SUBTRACT	6765	39081404	2056916.0
63245986	SUBTRACT	10946	63235040	3328160.0
102334155	SUBTRACT	17711	102316444	5385076.0
165580141	SUBTRACT	28657	165551484	8713236.0
267914296	SUBTRACT	46368	267867928	14098312.0
433494437	SUBTRACT	75025	433419412	22811548.0
701408733	SUBTRACT	121393	701287340	36909860.0
1134903170	SUBTRACT	196418	1134706752	59721408.0
1836311903	SUBTRACT	317811	1835994092	96631268.0
2971215073	SUBTRACT	514229	2970700844	156352676.0
4807526976	SUBTRACT	832040	4806694936	252983944.0
7778742049	SUBTRACT	1346269	7777395780	409336620.0
12586269025	SUBTRACT	2178309	12584090716	662320564.0
20365011074	SUBTRACT	3524578	20361486496	1071657184.0
32951280099	SUBTRACT	5702887	32945577212	1733977748.0
53316291173	SUBTRACT	9227465	53307063708	2805634932.0

86267571272	SUBTRACT	14930352	86252640920	4539612680.0
139583862445	SUBTRACT	24157817	139559704628	7345247612.0
225851433717	SUBTRACT	39088169	225812345548	11884860292.0
365435296162	SUBTRACT	63245986	365372050176	19230107904.0
591286729879	SUBTRACT	102334155	591184395724	31114968196.0
956722026041	SUBTRACT	165580141	956556445900	50345076100.0
1548008755920	SUBTRACT	267914296	1547740841624	81460044296.0
2504730781961	SUBTRACT	433494437	2504297287524	131805120396.0
4052739537881	SUBTRACT	701408733	4052038129148	213265164692.0
6557470319842	SUBTRACT	1134903170	6556335416672	345070285088.0
10610209857723	SUBTRACT	1836311903	10608373545820	558335449780.0
17167680177565	SUBTRACT	2971215073	17164708962492	903405734868.0
27777890035288	SUBTRACT	4807526976	27773082508312	1461741184648.0
44945570212853	SUBTRACT	7778742049	44937791470804	2365146919516.0
72723460248141	SUBTRACT	12586269025	72710873979116	3826888104164.0
117669030460994	SUBTRACT	20365011074	117648665449920	6192035023680.0
190392490709135	SUBTRACT	32951280099	190359539429036	10018923127844.0
308061521170129	SUBTRACT	53316291173	308008204878956	16210958151524.0
498454011879264	SUBTRACT	86267571272	498367744307992	26229881279368.0
806515533049393	SUBTRACT	139583862445	806375949186948	42440839430892.0

As you can see, every single number across the board is perfectly divisible by 19, specifically.

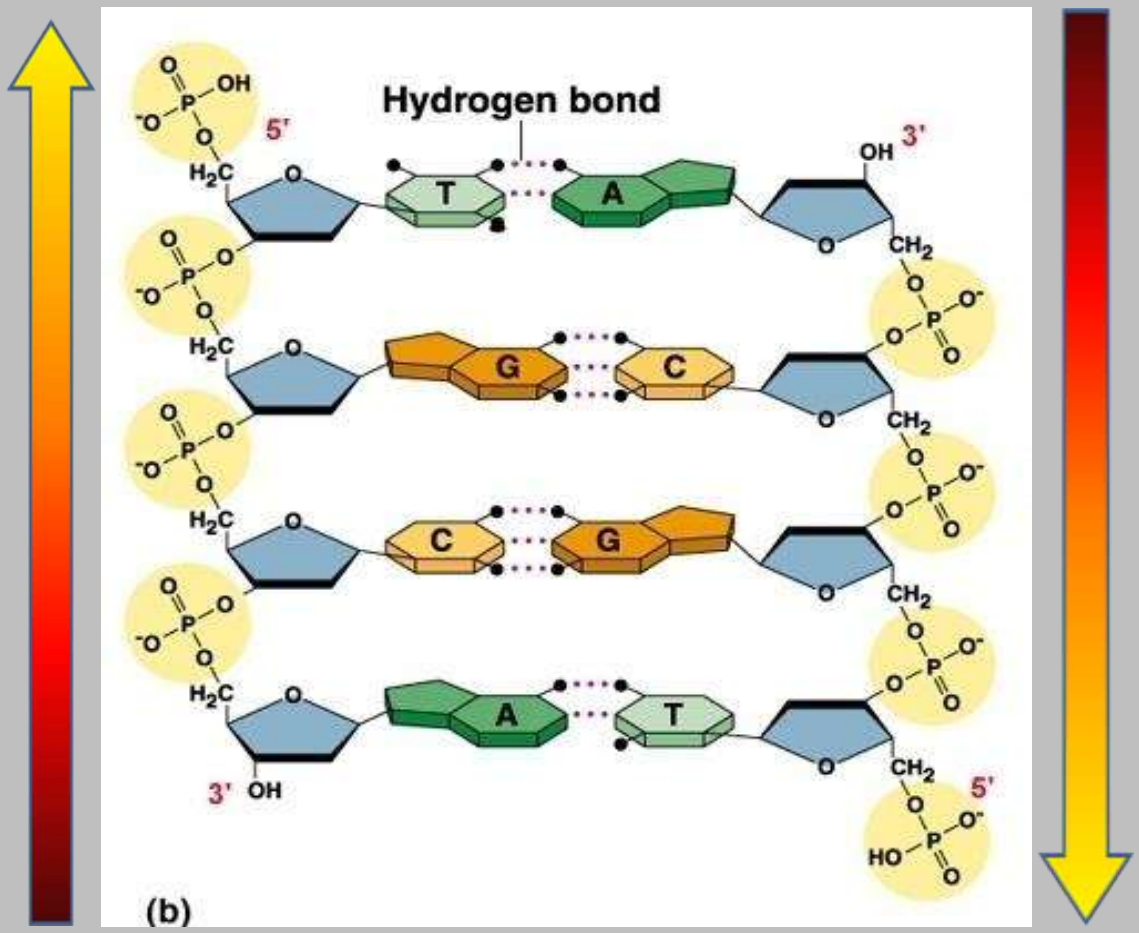
Conclusion

- Fibonacci Numbers & Golden Ratio are directly related to each other and the physical universe.
- When Fibonacci "Flip" formula applied **ALL** results divisible across the board specifically by number ***19.***
- To observe the Golden ratio in living Organisms on opposite sides of their bodies you have reverse or "FLIP" the Golden Ruler *(ie: backside to bellyside).*



However, there is another place where this "**Copy / Flip**" phenomena is found……

The building blocks of life. DNA. A perfect "Copy / Flip" phenomena.



For those who do not know. There is a book that was written over 1400 years ago that is mathematically encoded to number "19" . It was discovered by Dr. Rashad Khalifa in 1974 – exactly 1406 lunar years after this book was created.

19 x 74 = 1406……. and "19" is only mentioned in Chapter 74.

This Book is one of the religious scriptures.
This Book is the QURAN.

THE END

To watch the PowerPoint presentations *(with audio)* **:**

Fibonacci Numbers, The Golden Ratio & The Physical Universe
Lucas Numbers, The Golden Ratio & The Physical Universe

Please download the zip file at http://people.hws.edu/ahmed/fibonacci.exe

FIBONACCI RESULTS

Order	Fibonacci Numbers		Fibonacci No. Flipped	Result	Divide By 38
1	0	Add	2584	2584	68
2	1	Sub	1597	-1596	-42
3	1	Add	987	988	26
4	2	Sub	610	-608	-16
5	3	Add	377	380	10
6	5	Sub	233	-228	-6
7	8	Add	144	152	4
8	13	Sub	89	-76	-2
9	21	Add	55	76	2
10	34	Sub	34	0	0
11	55	Add	21	76	2
12	89	Sub	13	76	2
13	144	Add	8	152	4
14	233	Sub	5	228	6
15	377	Add	3	380	10
16	610	Sub	2	608	16
17	987	Add	1	988	26
18	1597	Sub	1	1596	42
19	2584	Add	0	2584	68

Sum to Midway Point of Fibonacci No. = **1672**

Of the 29 Initialed Suras, the midway Point is Sura 29 & the frequency of initials A.L.M. is **1672**

QURAN

Order	Initialed Sura	Initials	No. on Initials	Freq. of Initials
1	2	ALM	3	9899
2	3	ALM	3	5662
3	7	ALMS	4	5320
4	10	ALR	3	2489
5	11	ALR	3	2489
6	12	ALR	3	2375
7	13	ALMR	4	1482
8	14	ALR	3	1197
9	15	ALR	3	912
10	19	KHY'AS	5	798
11	20	TH	2	279
12	26	TSM	3	611
13	27	TS	2	121
14	28	TSM	3	581
15	29	ALM	3	1672
16	30	ALM	3	1254
17	31	ALM	3	817
18	32	ALM	3	570
19	36	YS	2	285
20	38	S	1	29
21	40	HM	2	444
22	41	HM	2	324
23	42	HM-ASQ	5	562
24	43	HM	2	368
25	44	HM	2	166
26	45	HM	2	231
27	46	HM	2	261
28	50	Q	1	57
29	68	N,N	2	133

Stay tuned for more interesting correlations between the Fibonacci Numbers & Fibonacci "Flip" results and THE QURAN.

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- Stephanie Miller
- Mark Gabriel
- Albert Poch Huguet