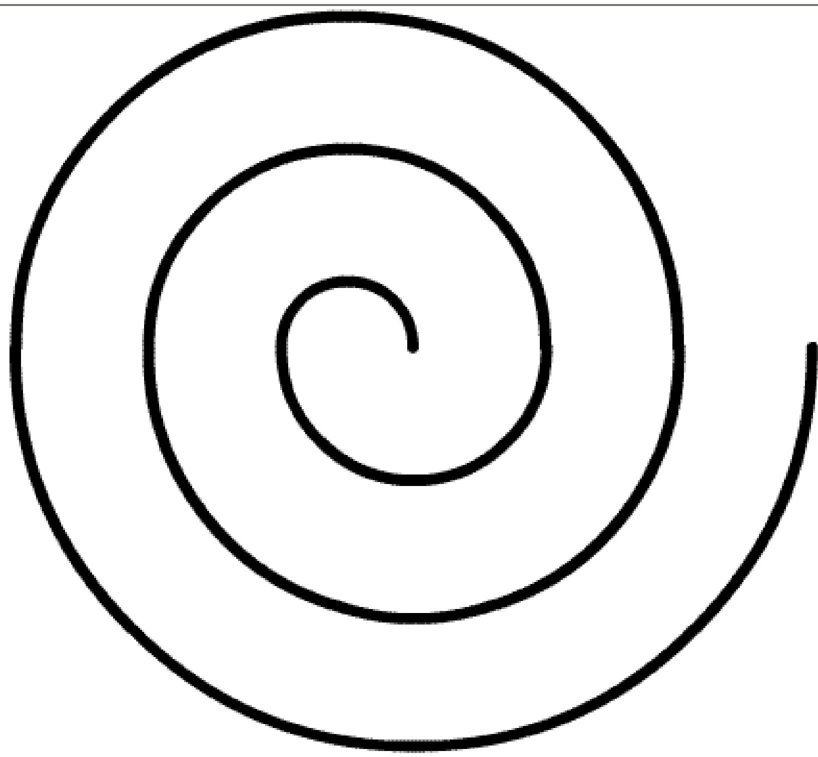

Here is an involute with radius's of 1.25*(k*(2.22512/1.25))

Think of an involute as a string revolving around a pole. As the string becomes longer this is what is created.

We can use this to explain curves and to explain circular funtions such as the sine and cosine graph.

Read below than study the graphs that follow.

Temporary Work

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20060806

As seen a changing circle or rather a changing chord can be expressed by an involute. (See Chord vs Circular Function) We can imagine a string unwinding around the circular function and that will lead to the discovery of all the values on the circular function. The rate of change is the key. The angles that are contained in the involute are proportional. That means that any involute representing the changing rate of the circle can be use.

Pictured here is an involute used to solve a circle starting with a chord of 1.25 units.
Here is the equations:

2.22512 = radius of first involute arc = radius of circle with chord 1.25 = distance covered at Pi radians
2.22512 * 2 = 4.45024

2.22512/1.25 = rate of change of involute per arc (at every Pi radians)

1.25 * 2.22512/1.25 = 2.22512
for remaining arcs...
1.25 * (2*(2.22512/1.25 = 2.22512) = 4.45024
1.25 * (3*(2.22512/1.25 = 2.22512) = 6.67536

It is important to note that this involute was drawn by geometric construction. Reference or construction is “Technical Drawing” Tenth Edition, Giesecke page 142

This common to draw an involute of a line was slightly modified to fit the rate of change of 2.22512/1.25 . The center of the 2.22512 radius circle was used as the line the involute was constructed around. This is so the unwrapping of the “string” would start at the end of the 1.25 chord. It is difficult to explain in words, but by studying the diagrams it is easily seen.

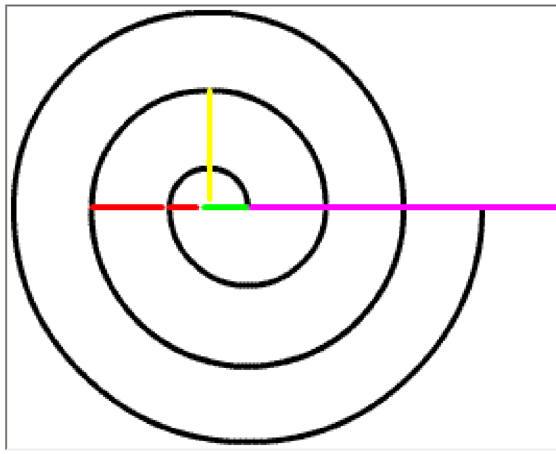
Recalling the equation 1/(1.25/4) = 3.2... Now there is an equation for a logarithmic spiral. If the 1.25 chord was revolved and increased to maintain a circular arc. This logarithmic spiral can be drawn by connected every value of the involute by 2. So maybe we can find a simpler equation for both the involute and spiral.

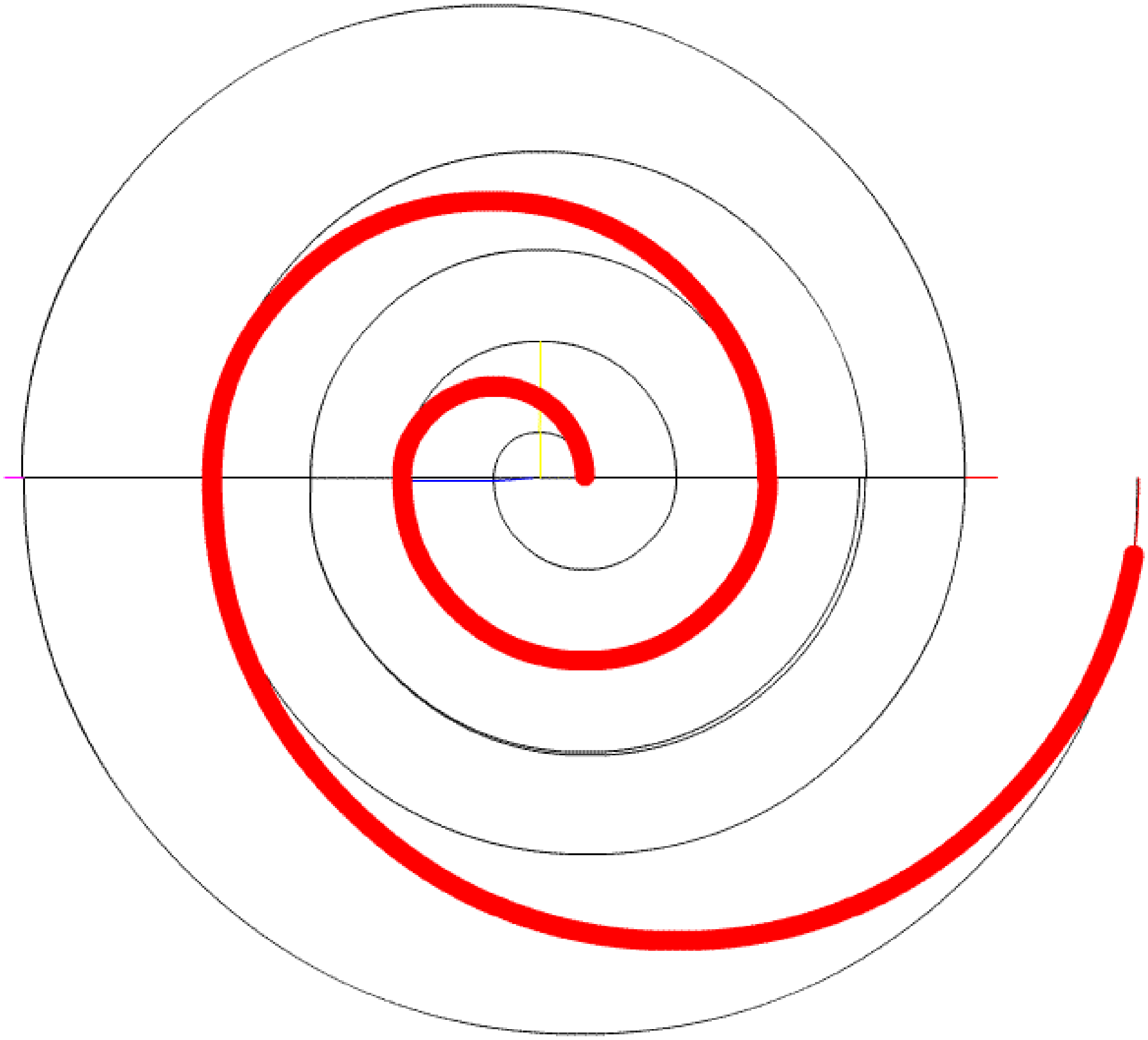
3.2 + 1.25 = 4.45
4.45/2 = 2.22512 also the radius

What is the application? Most importantly it describes circular functions such as the sine and cosine. Also it is its own coordinate system. Imagine how curves could be described only using elementary mathematics. But these are yet to be found!

In this graph the small red line plus the length of the horizontal green line at the center is the radius 2.22512 respectively . This involute is based on a change of 2.22512 per Pi radians.

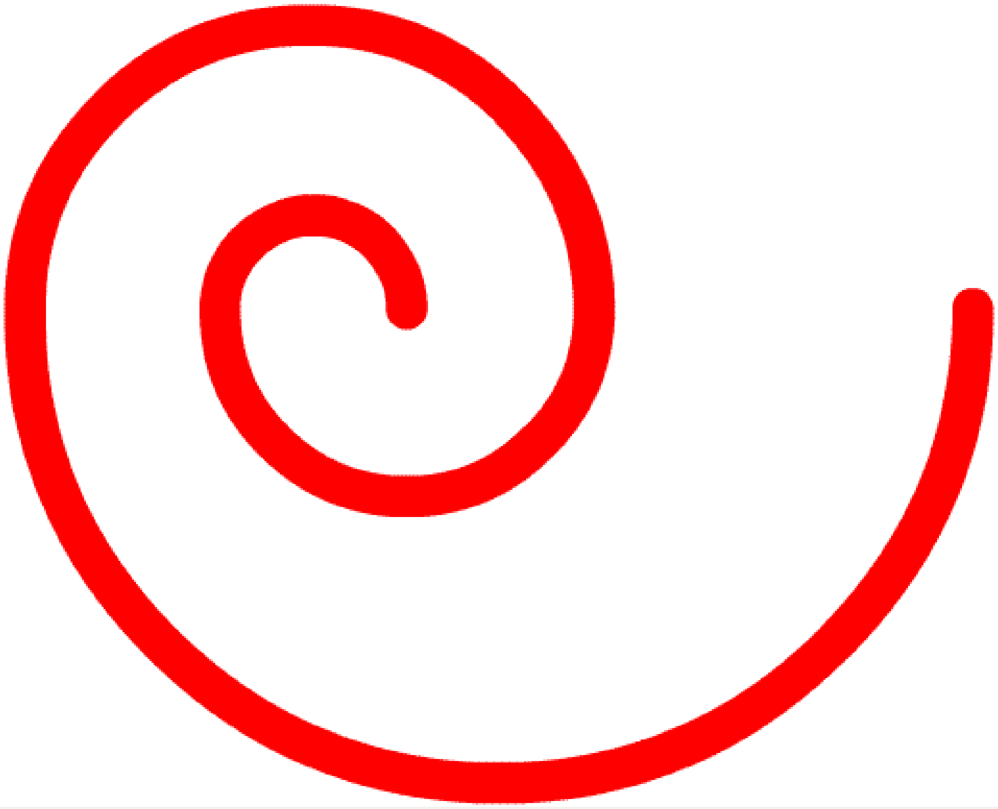
Also pay attention to the two red lines combined. This is the diameter of the circle we solved for. It has a length of 3.2 units. That is taken from the end of the green line. Add the green line and you get the diameter of 4.45 units. If we were to base our shape on the diameter we would have drawn a logarithmic spiral.





This shows the logarithmic spiral drawn drawn over the involute. Recall the equation 1/(1.25/4) = 3.2.

This is very valuable information when solving for circular funtion. It would also be a challenge for the curious mathematicain to try and find the coordinate system that is created. Also we have found similarites between involutes and logarithmic spirals



*Note do not confuse a logarithmic spiral with the Spiral of Archimedes. Admittedly these spirals can be confusing. A good source for a basic definition is www.wikipedia.org .... May the Creative Force be with You!

Temporary Work

20060612 revised 20060712

So far explanations have been limited to using mostly algebra and trigonometry. However, an excellent way to use the parabola that is found by chord vs. radius length is to use some things learned in calculus.

So what is found by taking the derivative of a value on the parabola?

20060613

$$x^2+8x+16=0$$

$$\frac{d}{dx}[x^2+8x+16=0] =$$

=2x+8

20060614 — 20060705 revised 20060712

Ideally, if you could describe the circle over time you would have a new way to describe a parabola and ultimately the quadratic equation. (However this is based on finding a way to easily describe the circle.)

Calculus has many tools to describe functions and their curves. Perhaps a new math will be developed to explain curves using circles and how much the curve deviates from the circle. The new math would be called Circulus.

There is a problem with setting up a custom coordinate system or reference circle and have it describe the curve in a useful manner. It is definitely a challenge.

20060711 — 20060712

But before beginning a long mathematical journey to solve the unknown and uncharted curves, perhaps something simple has been overlooked. Sometimes in math all the power of calculators and complex mathematics such as calculus are not needed. Instead a simple algebraic formula does the job.

There is a simple discovery that might just prove to be the most useful application of the parabola that represents a chord. With that parabola, it is known what circle will encompass a given chord. But what if the chord lies on a circular function, such as the sine curve (or cosine) often used in the study of electricity? By knowing just the period, the cycle through which the graph makes, and the chord or value at a given x distance-- the maximum value of the circular function (also the radius of the circle) can be solved easily.

20060723 — 20060724
Attention: This is just a theory and an outlined experiment. It is not guarantied to work. But sometimes the idea is just as interesting as a working solution.

Theory: If an arc that encompasses a chord on a sine curve (circular function) is known, the rest of the graph can be solved, with emphasis on the maximum value. We take the parabola, (Parabola Key), and find the positive value of the radius that corresponds to the given chord. It does not matter if this is the smallest encompassing circle. However, the graph must be of a circle with constant proportion. Proportions that are based on the reference circle around the chord and are consistent throughout the parabola. (The parabola graph we use is based on a chord of 1.25 and a perpendicular bisector of 2. See Arched Door problem.)

From the new radius we found on the parabola – x-chord vs. y-radius, we now have to different radius occurring at different positions. Because the change in chord is related to an involute, or unraveling string around a fixed point, (with the exception of its position not being at the center of a circle), we will assume the radius of the encompassing circle that is the max value of the sine curve occurs every Pi radians from the start of the original chord. Now we just have about enough information to solve for the max value of the sine curve.

The most important factor on which all measurements are based is taking the rate of change of the chord to find the angle the new radius will be from the radius of the circle encompassing the max value of the sine curve. This rate was solved by using previous methods of solving for an unknown chord. We need to find out how much the chord changes in Pi radians.

This description is hard to convey in words follow along in the example.

$$\text{Given: } s=?, \text{ chord} = 107, \; r = 210 + 4, \text{ rate} = 1.7801 \text{ per } \pi \;, \; \theta = ?$$

Note this example uses a chord of 107 units.
Since we are using a reference circle of chord 1.25 and radius 2.22512 already found by known equations. We refer to the graph of the parabola and get a radius of 210 +4 or 214.
The next crucial step is finding the rate of change of the circle as the chord is unwinding around its center. An unvolute increases to its next radius every Pi radians. The rate of change of the radius per turn would be equal to the radius divided by the chord. Remember this rate is the rate of the reference circle and not of the end result. That is because the end result's encompassing circle will be a smaller circle. One in which the circle encompasses both the new chords radius and the max value of the sine curve's radius.

$$rate = \frac{2.22512}{1.25} = 1.7801$$

Now to find the angle the final radius makes unwinding around the circle like an involute.

$$\frac{end\ radius}{rate} * \pi = \frac{214}{1.7801} * \pi = angle\ of\ final\ radius\ in\ radians = 377.676\ radians$$

That angle in radians will be converted to degrees for easier calculations and give a better estimate of how much the angle is.

$$\frac{180}{\pi} = \frac{x}{377.676} = 21639.2\ degrees$$

$$\frac{21639.2}{360} = 60.109$$

60.109 - 60 = 0.109
360 * 0.109 = 39.24 degrees

That is to find the angle after wrapping many times around 360 is a percentage of 360 degrees.

$$\frac{chord}{\sin\ of\ new\ found\ angle} = max\ value\ of\ sine\ curve = \frac{107}{\sin(39.24)} = 169.151$$

So an chord of 107 units on a sine curve should be encompassed by a radius of 169.151 which is also the max value of the sin curve.

Attention: It is important to understand this may not work. It is only to outline an idea and create a problem to work on. The one main fault of this work may in fact be the rate of the changing radius. It can be both confusing and challenging to solve. But until these things are found work through the problem and find your own answers.

20070618—20070619

It is important to read about the Prime number problem in this order:

(Note all Math Hunches can be found here.)

1. This summary
2. Spiral Prime Numbers
3. Prime Number Theory
4. Prime# Solution
5. The sequence of Prime Codes

The theory relies on the fact that there are 2 unique logarithmic spirals each of which have values based on a Prime number. And as the “arc” of the logarithmic spiral changes so does the values that it describes. Therefore the Prime numbers are revealed.

The equations that describe logarithmic spirals can be difficult to use when trying to isolate values of single variables. That is why the equations used to find the logarithmic spirals use a well known Trigonometry equation: arc length equals radius times angle in radians or as commonly written: S = r * theta . So most all the equations that appear in this writeup use S = r * theta or are derived from that simple Trigonometry equation.

$$S_2 = \textit{the arc length of the second logarithmic spiral}$$

$$\pi * [x + r_1] = S_2$$

$$P_2 = S_2$$

$$(\textit{Note: mainly equations rely on } S = r * \theta)$$

$$\textit{for } P_2 = [x + r_1] * \pi \textit{ and } P_2 = \frac{r_2 * S_2}{x + r}$$

$$\textit{first derive } P_2 = [x + r_1] * \pi$$

$$\textit{found } \frac{P_2}{x + r_1} = \theta = \pi$$

$$\textit{multiply both sides by } \frac{1}{x + r_1} \textit{ to get}$$

$$P_2 = [x + r_1] * \pi$$

―――――――

———

$$next\ derive\ P_2 = \frac{r_2 * S_2}{x + r}$$

$$P_2 = \frac{P_2 * \pi}{\pi * [x + r]}$$

$$\pi\ cancels$$

$$P_2 = \frac{P_2}{[x + r]}$$

$$\frac{P_2}{[x + r]} = \frac{Prime\#}{segment}$$

$$\frac{P_2}{S_2} = \frac{r_2}{x + r}$$

$$so\ that\ P_2 = \frac{r_2 * S_2}{x + r}$$

the following equations are to show how "S" or arc length on spiral relates

$$S\ of\ 2nd\ \log\ spiral = r_1 * \pi = \frac{Prime\#}{segment} * r_1$$

$$example\ S\ of\ 1st\ \log\ spiral = 19 = \frac{19}{\frac{19}{\pi}} * \frac{19}{\pi}$$

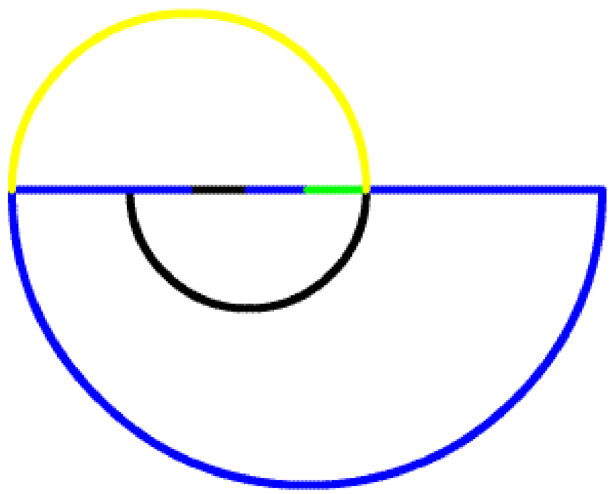
———

$$S\ of\ 1st\ \log\ spiral = r_1 * \pi * \cos^{-1}[\frac{Prime\#}{\pi} * \frac{1}{Prime\#}]$$

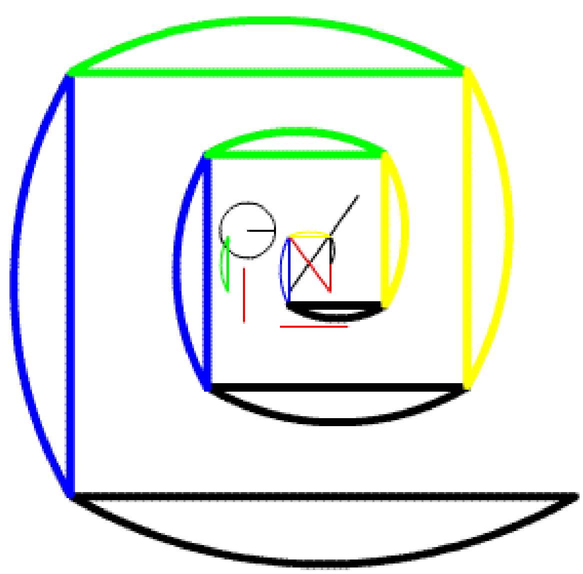
$$S\ of\ 1st\ \log\ spiral = r_1 * \pi * \cos^{-1}[\frac{1}{\pi}]\ for\ all\ S$$

$$example\ S\ of\ 1st\ \log\ spiral = 19 * \cos^{-1}[\frac{1}{\pi}]$$

$$(Note\ \frac{1}{\pi} = 180\ degrees\ which\ is\ the\ change\ of\ every\ Prime\ value.)$$

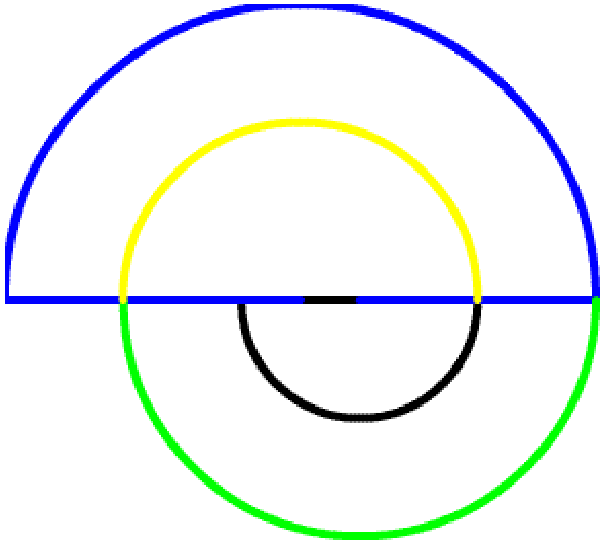


Above Logarithmic Spiral has segment = (radius of Prime#) / Pi
and each arc of the incircling spiral = to the Prime #



The Above Logarithmic Spiral has a chord (the line shown under the arc) of (Prime number / Pi)

Below is just an involute I was experimenting with.



I will be adding more content to support this work soon. However do not wait and test the theory for yourself.

May the Creative Force be with You!

Temporary Work

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20070418—20070419

This “Hunch” is not really a complete solution, although some things will be discovered. This Hunch’s purpose is to present a challenging math problem. One that I feel has an answer, but the answer is no easy task. This problem is looking for patterns of in prime numbers, a problem which has existed for centuries and has no simple solution.

Here is the Problem:

Mathematicians have been searching for patterns in prime numbers to see if there is any way to determine where higher prime numbers will occur. This isn’t a difficult task for small numbers but as numbers increase, computers cannot find the answer in short times. So if there was a simple way (although it might not be easy to find), many math problems such as encryption could be solved. So that is the goal–to find an easy way to identify prime numbers.

I propose this: We already know many properties of involutes and logarithmic spirals. It would be useful to note what is the absolute length around a logarithmic spiral. (the length of the spiral itself)

Well it is difficult to find this value without an equation. But with basic trigonometry we know that [S = r * (angle of rotation in radians)]. So we know certain parts of the logarithmic spiral is based on this rule. (See previous math hunch.)
We also know about the integral from calculus. Perhaps there is a way to use the summation of the logarithmic spiral section. —But perhaps we don’t even have to employ such advanced techniques. Since the logarithmic spiral is directly related to an involute, maybe if we create an logarithmic spiral based on the change of prime numbers, we can find a simple way to describe the logarithmic spiral using an involute. (Again see previous math hunch.)

Since division is a matrix of values there has to be a pattern in primes due to the fact they are not divisible by any number but themselves and 1. (*This has to be proven.) Logarithmic spirals can show these values. The only problem is describing the logarithmic spiral with an equation. So we must rely on the knowledge of logarithmic spirals, involutes, and parabolas to show special “number theory” relationships.

The grunt work of drawing and solving the logarithmic spiral:

A logarithmic spiral needs to be constructed. (See following drawings.) It is broken into several circular segments. For every pi radians the arc length (S) equals the sequence of the prime numbers. For example, we start with an arc length of 2—the following arc is the next prime number 3.

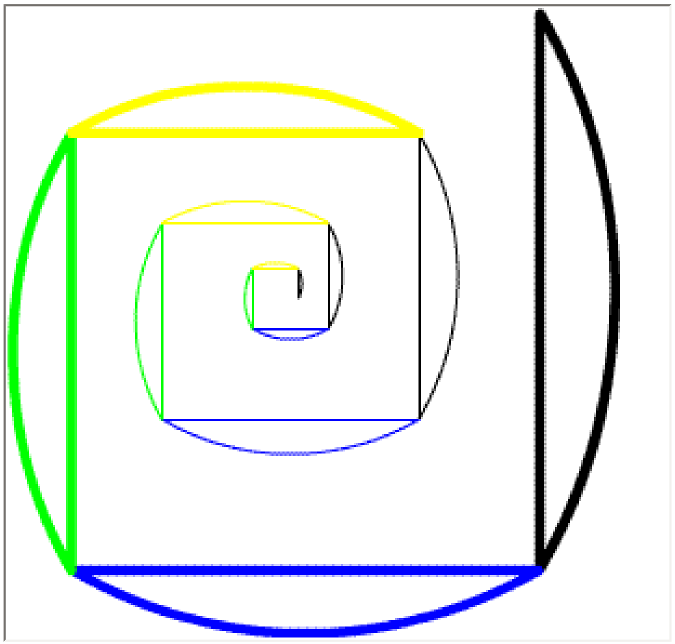
To create this drawing a line equal to 2/pi was drawn. Then an arc of radius 0.63662 (which equals r = S/(angle in radians) = 2/pi) was drawn over top the line. This sequence is repeated for each pi radians with the arc with radius— (prime number/pi)— drawn perpendicular to the preceding value.

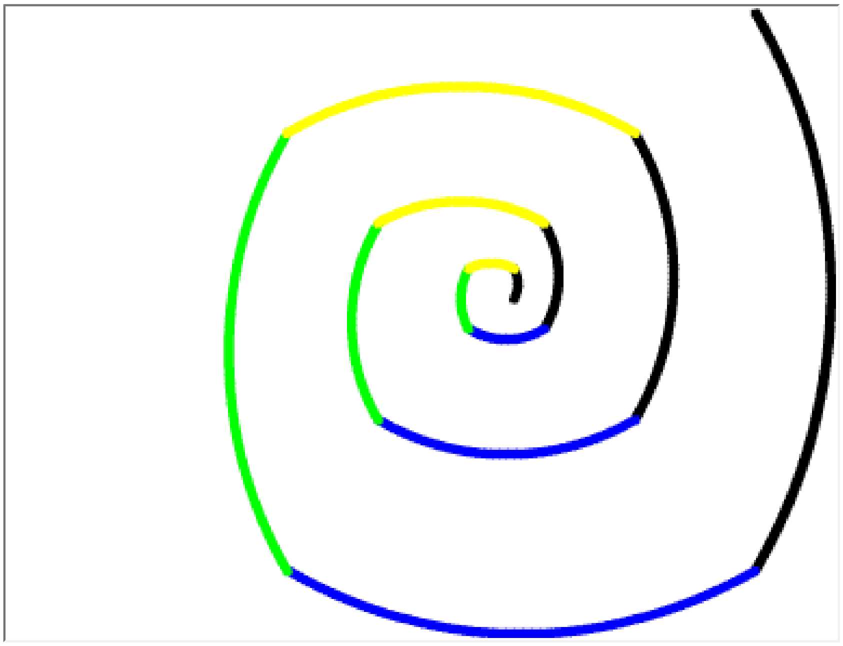
Find the involute that describes this logarithmic spiral and you will have found a way to find prime numbers!!!!

references:

1. "Old and New Unsolved Problems in Plane Geometry and Number Theory", Victor Klee--Stan Wagon, (for basic information of primes and help choosing a problem to work on)

2. WikiPedia.org (for list of prime numbers and basic definitions)





You can download the file yourself to get exact values. It is an AutoCad 14 dxf. Click Here. Save target as

20070605

Theory: How to determine (verify) and predict if a number is Prime:

Most all mathematics can be explained graphically. So why should this not be true of prime numbers.----

If a logarithmic spiral is created with each Pi radians * the radius equal to the corresponding sequential prime number---- then the equation of the logarithmic spiral describes the changing of the rate and can be used to determine and verify prime numbers.

$$prime\#\ unknown = P_2$$

$$previous\ known\ prime\# = P_1$$

$$r_1 = radius\ of\ arc\ (of\ logarithmic\ spiral)\ at\ prime\ value\ P_1$$

$$x = \frac{P_2 - P_1}{\pi} = the\ unknown\ change\ of\ rate\ between\ P_2\ and\ P_1$$

$$\frac{P_1}{r_1} = \theta = \pi$$

$$\frac{P_2}{x + r_1} = \theta = \pi$$

$$substitute\ and\ if\ the\ number\ is\ prime\ the\ second\ equation\ will\ equal\ \pi$$

$$example$$

$$19,\ 23$$

$$\frac{23}{\frac{19}{\pi} + \frac{23\text{-}19}{\pi}} = \pi$$

$$It\ checks.\ It\ is\ next\ on\ the\ logarithmic\ spiral.$$

I will be adding more content to support this work soon. However do not wait and test the theory for yourself.

May the Creative Force be with You!

20070609

Here there are 2 logarithmic spirals that are based on Prime numbers. The one the first set of equations are based on Click Here and the second:

... drawn in boxed construction... with the segment = the radius of (Prime# / Pi)

(Note this logarithmic spiral was originally posted in May2007.)

So there are 2 known log spirals which we know much information about. We can use this knowledge to combine equations and solve for Prime numbers.

Note this solution will only use the basics of Algebra and Trigonometry. I tested well over 500 equations. Only the correct ones will be shown here. Proof of the theories and work will be added over time.

$$Given\ boxed\ logarithmic\ spiral\ were$$

$$segment = the\ length\ of\ \frac{Prime\#}{\pi}$$

$$incircled\ by\ a\ circle\ with\ radius\ of\ Prime\#$$

$$so\ that\ \frac{Prime\#}{segment} = \pi$$

$$With\ derived\ equations:$$

$$\frac{P_2}{x+r_1} = \frac{Prime\#}{\pi}$$

$$P_2 - P_1 = S_2\ and\ \pi^*[x + r_1] = S_2$$

$$\left|\frac{P_2}{S_2} = \frac{r_2}{x+r_1}\right.$$

$$P_2 = [x + r_1] \ and \ P_2 = \frac{r_2 * S_2}{x + r}$$

so that the 2 equations can be solved by the quadratic equation

$$[x{+}r_1] * \pi = \frac{r_2 * S_2}{x + r}$$

$$[x{+}r_1]^2 = \frac{r_2 * S_2}{\pi}$$

----

test two Prime numbers 19 and 23

$$[x{+}r_1]^2 = \frac{r_2 * S_2}{\pi}$$

$$[x{+}6.04789]^2 = \frac{7.32113 * 23}{\pi}$$

$$x^2 + 12.0958x + 36.577 = \frac{168.0386}{\pi}$$

$$x^2 + 12.0958x - 17.0219 = 0$$

$$quadratic \ equation\text{:} \ x = \frac{-b +- \sqrt{b^2 - 4 * a * c}}{2 * a}$$

for 19 and 23: $x = 1.27364$

Plug x into $P_2 = [x + r_1] * \pi$

$$[\frac{19}{\pi} + 1.27364] * \pi = 23.00013 = 23$$

It works!!!!

I will be adding more content to support this work soon. However do not wait and test the theory for yourself.

May the Creative Force be with You!

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20070616

This program now compiles. Unfortuanetly I can't get MS Visual Studio 2005 to run it. The only problem I see is the "if" statement not running due to S1 being a float with a decimal and S2 is an integer. This is one step closer to a running program.

I will keep updating the site with the work behind the numbers, but until then... ***May the Creative Force be with You!***

(Unknown Scope)

```
#include <iostream>

using std::cout;
using std:: endl;

int main()
{    float S1, S2, x, a, b, c;
     int loop, counter
     loop = 1;
     S1=2;
     for (loop = 1 to 100; loop++)
     {
          S2 = loop;
          a = 1;
          b = 2 * (S1/3.14159);
          c = (((S2/3.14159) * S2) /3.14159) - (S1/3.14159)^2;
          x = ((-1*b)+ sqrt((b^2 + 4*a*c))) / (2*a);
          if (S1 + x == S2)
          {
               cout << S2;
               cout << end;
               S1 = S2;

          }
     }
     return 0;
}
// This loop finds all primes from 1 to 100--- change the for statement
```

$$Given\ boxed\ logarithmic\ spiral\ were$$

$$segment = the\ length\ of\ \frac{Prime\#}{\pi}$$

$$incircled\ by\ a\ circle\ with\ radius\ of\ Prime\#$$

$$so\ that\ \frac{Prime\#}{segment} = \pi$$

$$With\ derived\ equations:$$

$$\frac{P_2}{x+r_1} = \frac{Prime\#}{\pi}$$

$$P_2 - P_1 = S_2\ and\ \pi^*[x+r_1] = S_2$$

$$\left|\frac{P_2}{S_2} = \frac{r_2}{x+r_1}\right.$$

$$P_2 = [x + r_1] \; and \; P_2 = \frac{r_2 * S_2}{x + r}$$

$$so\ that\ the\ 2\ equations\ can\ be\ solved\ by\ the\ quadratic\ equation$$

$$[x{+}r_1] * \pi = \frac{r_2 * S_2}{x + r}$$

$$[x{+}r_1]^2 = \frac{r_2 * S_2}{\pi}$$

$$test\ two\ Prime\ numbers\ 19\ and\ 23$$

$$[x{+}r_1]^2 = \frac{r_2 * S_2}{\pi}$$

$$[x{+}6.04789]^2 = \frac{7.32113 * 23}{\pi}$$

$$x^2 + 12.0958x + 36.577 = \frac{168.0386}{\pi}$$

$$x^2 + 12.0958x - 17.0219 = 0$$

$$quadratic\ equation:\ x = \frac{-b +\!- \sqrt{b^2 - 4 * a * c}}{2 * a}$$

$$for\ 19\ and\ 23:\ x = 1.27364$$

$$Plug\ x\ into\ P_2 = [x + r_1] * \pi$$

$$[\frac{19}{\pi} + 1.27364] * \pi = 23.00013 = 23$$

$$It\ works!!!!$$

I will be adding more content to support this work soon. However do not wait and test the theory for yourself.

May the Creative Force be with You!

Constructor's Corner

It's all about IDEAS

www.constructorscorner.com

Click Here to See Video

20070713-20070716

This is the first podcast on www.constructorscorner.com . It is not perfect. The seen is myself speaking for about 5 minutes. That is to show that in just 5 minutes a lot of math can be done. What is learned can be thought of the entire day. You will learn something or find something new in just a short time. It is good for all math levels.

In art, all one needs is tools. A pencil and paper are enough to create some great things.
In math, theories and equations are the tools. You can do a lot while only knowing a little.

There are some areas to improve in the first video. First the board can be difficult to read due to filming. Also, this is a way for me to improve my teaching skills. Play the video to see the very first installment of “Minute Math.”

Notes for video:

The 4 equations which is difficult to see due to movie compression are:

on the left side:

$$[x + r_1]^2 = [\frac{r_2 * S_2}{x + r}]$$

and

$$x^2 + 12x - 17 = 0$$

on the right side

$$r = ae^{b\theta}$$

and

$$\theta = \frac{1}{b}\ln(\frac{r}{a})$$

The 4 equations which is difficult to see due to movie compression are:

on the left side:

$$[x + r_1]^2 = [\frac{r_2 * S_2}{x + r}]$$

The above equation can be applied to any series. The values of the variables are just changed to correspond to the new values of the logarithmic spiral.

and

$$x^2 + 12x - 17 = 0$$

The above equation comes from the first equation. It changes according to the given series. It's graph forms a curve. The curve's important characteristics is that there are steps (with each π radians of the logaritmic spiral -- corresponding to the numbers of the series) that once discovered unlock the pattern to the series. (These steps remind me off the integral steps. That is a rectangle getting smaller and smaller. But here we are only looking to make the step the correct size.)

$$on\ the\ right\ side$$

$$r = ae^{b\theta}$$

$$and$$

$$\theta = \frac{1}{b}\ln\left(\frac{r}{a}\right)$$

The above equations are from wikipedia.org. They are the equations of a logarithmic spiral. If we could subsitute in the values we know from the previous equations. This will prove or disprove the theory of using a logarithmic spiral for series. We need the values of the previous equations, because without them there are too many unknowns.

In the video, you may hear me refer to the previous equations as a hack. I say that because we must know the previous value to determine if the next number is prime. If we could solve the above equations we would have the true pattern to the series. We would also be able to predict the results.

I will be adding more content to support this work soon. However do not wait and test the theory for yourself.

May the Creative Force be with You!

Click Here to Review Past Work on Prime Numbers

20070823-revised_20070724

We already have found the parabola which describes Prime numbers as they are mapped across a logarithmic spiral every Pi. We find by looking at the parabola that its equation equals the arc length of the logarithmic spiral. That is the y coordinates of the graph of the parabola. We also find that when we solve for x by the Quadratic equation that x equals the radius.

$$\textit{Given through inspection:}$$

$$S = f(x)$$

$$r = x$$

$$\textit{since } \theta = \frac{s}{r} \textit{ then } \theta = \frac{f(x)}{x}$$

Since our goal is to write an equation that describes the Prime numbers mapped on the logarithmic spiral, it is necessary to find a and b in the equation: $\mathrm{r} = \mathrm{a}e^{b\theta}$

However with a and b there are 2 unknowns. This proves to be a difficult problem to solve. However there are some tricks in our tool bag. When out of ideas: experiment. I tried to put this equation into usable form. I searched Wikipedia.org and Wolfram's "MathWorld" and found an equation that on a hunch I thought was useful.

That equation[1] is: $\frac{dr}{d\theta} = abe^{b\theta} = br$

There is a bit of improvisation here. There is no direct way to relate the radius and the angle theta together in the derivative part of the equation. However with a little math tinkering, we can find dr/ds and d-theta/ds. Since they both relate to ds, we can compare there derivatives together. That is the derivative of r opposed to theta.

$$\textit{the derivative of } \theta \textit{ as opposed to } s$$

$$\frac{d\theta}{ds}\left[\frac{f(x)}{x}\right]$$

$$\textit{the derivative of } r \textit{ as opposed to } s$$

$$\frac{dr}{ds}[x] \;\; ;where\; f(x) = x^2 + 12.0958x - 17.0219$$

$$\textit{so we use the Quadratic equation to solve for } x$$

$$\textit{so now we compare the derivatives of the radius } (r) \textit{ and angle } (\theta)$$

$$\frac{dr}{d\theta} = \frac{dr}{ds} * \frac{ds}{d\theta} \; ;where\; \frac{ds}{d\theta} \textit{ is the inverse of } \frac{d\theta}{ds}$$

$$now\ we\ substitue\ \frac{dr}{d\theta}\ into$$

$$\frac{dr}{d\theta} = br$$

$$to\ find\ b\ and\ then\ subsitute\ b\ into$$

$$abe^{b\theta} = br$$

$$to\ find\ a$$

$$and\ place\ a\ \&\ b\ into\ the\ equation\ of\ the\ logarithmic\ spiral:$$

$$r = ae^{b\theta}$$

$$This\ should\ describe\ the\ series\ of\ choice\ depending\ on\ what\ the\ parabola\ was\ solved\ for.$$

It is important to note that this is just a "hunch." It is a summary of my best (however, incomplete) work on trying to put the Prime numbers ordered across every Pi of a logarithmic spiral into an equation. If this math holds true it could mean a great advancement in cryptography. Ideally if some of the values of the encryption algorithm were known, you could decode it with equations like these by finding the series it was encrypted with. That is wishful thinking, but it just may work. That is, a step in the right direction.

References:

1. Logarithmic Spiral from Wolfram MathWorld [equation noted with 1]
2. Wikipedia.org for equation references

I will be adding more content to support this work soon. However do not wait and test the theory for yourself.

May the Creative Force be with You!

Temporary Work

____
20070916---20070919

Theory:

When an equation is unknown an equivalent equation can be found if the values of the function are known and those values are in chronological order.

If those values are part of function most often then the parabola found (by previous method–click here) will contain the values of all numbers of the desired function (equation). However, where the values are positioned on the parabola needs to be found. If we represent this parabola as a logarithmic spiral, in which every part of the function is mapped every Pi, we only need to solve for the equation that describes the logarithmic spiral. (Which in itself is a challenge.)

Perhaps if the unknown equation's results appear to be random, a parabola can be found between each known point and the best fit or average of the parabolas will help approximate the equation of the unknown equation.

Solving for the parabola using this equation HERE. Solve for the logarithmic spiral using this experimental work. (It is recommended to read all the supporting work.)

$$P_2 = [x + r_1] \ and \ P_2 = \frac{r_2 * S_2}{x + r}$$

so that the 2 equations can be solved by the quadratic equation

$$[x{+}r_1] * \pi = \frac{r_2 * S_2}{x + r}$$

$$[x{+}r_1]^2 = \frac{r_2 * S_2}{\pi}$$

Example:

HTTP://EQWORLD.IPMNET.RU/FORUM/VIEWTOPIC.PHP?T=1589 View previous topic :: View next topic

Author	Message
alfred05_06 Joined: 01 May 2007 Posts: 2 Location: indonesia	Posted: Tue 01 May 2007 10:14 Post subject: HELP ME TO MAKE THIS FORMULA PLEASE... quote hello everybody, i have problem with this number can you solve this formula ?? 1st number is 25 2nd number is 94 3rd number is 98 4th number is 55 5th number is 57 6th number is 74 7th number is 41 8th number is 42 or i'll make it to this position : 25, 94, 98, 55, 57, 74, 41, 42 so the question is, what the next number will be shown it??? who can help me to make this formula, please reply??? btw,thanks to everyone...

Alexei Joined: 25 Jan 2006 Posts: 162 Location: Moscow, Russia / Cardiff, UK	Posted: Tue 01 May 2007 18:21 Post subject: Re: HELP ME TO MAKE THIS FORMULA PLEASE... quote Do you believe those numbers represent a determined processes? If there is some sort of stochastics in it, the next number may only be predicted with some degree of probability.
Back to top	profile pm
alfred05_06 Joined: 01 May 2007 Posts: 2 Location: indonesia	Posted: Wed 02 May 2007 20:43 Post subject: th next number quote the next number is 55... this number isn't represent a determined process, but it's maybe a random number... i don't know exactly what they used in formula to making the next number.. i had been analyse this problem for 3 years to looking for that formula but until now i didn't found it... so, to everyone who can help me to solve this problem you can reply it... thanks
Back to top	profile pm YIM

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Example

I will used an example to a problem I found at http://eqworld.ipmnet.ru/forum/viewtopic.php?T=1589

The problem is borrowed. However the proposed solution is totally mine. That is even if it doesn't work, it shows the concept behind how I envision these problems to work.

Note we all finding a relationship between the change of the numbers. We will use the absolute value of each change. This works since the final change will be plus or minus that value. Doing so lets us find the values of negative and positive values.

We are testing for a pattern in the rate of change first. That is the most logical since that is where most patterns original. However if that does not work, we will test the actual value of the numbers themselves.

$1st\ number\ is\ 25$

94-25= 69

$2nd\ number\ is\ 94$

98-94= 4

$3rd\ number\ is\ 98$

55-98= -43

$4th\ number\ is\ 55$

57-55= 3

$5th\ number\ is\ 57$

74-57= 17

$6th\ number\ is\ 74$

41-74= -33

$7th\ number\ is\ 41$

42-41= 1

$8th\ number\ is\ 42$

55-42= 13

$9th\ number\ is\ 55$

test 2 rates of change in order of occurance

$$[x+r_1]^2 = \frac{r^2 * S_2}{\pi}$$

$$[x+first\ rate\ of\ change/\pi]^2 = \frac{[second\ rate\ of\ change/\pi]^2 * second\ rate\ of\ change}{\pi}$$

$$[x+(69/\pi)]^2 = \frac{(4/\pi)\ * 4}{\pi}$$

$$x^2 + 43.9268x+482.39 = 1.62114$$

$$x^2 + 43.9268x+480.769 = 0$$

This graph of the equation should contain every rate of change value (plus or *minus) at every Pi increments along the x-axis.*

This graph of the equation should contain every rate of change value (plus or minus) at every Pi increments along the x-axis.

It is important to note that this is just a concept. It is an idea on how to work at finding a pattern among unknown numbers that appear to be random. It would be useful in cryptography if it worked. However I am unsure of the truth of the math. It is a great concept and it is a good idea to tinker with, but the question is: Does the math hold true???

I will be adding more content to support this work soon. However do not wait and test the theory for yourself.

May the Creative Force be with You!