GEOMETRICIAN'S VIEWS

TOPIC: LOGARITHMIC SPIRAL

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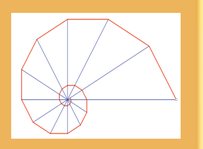
Mathematical View

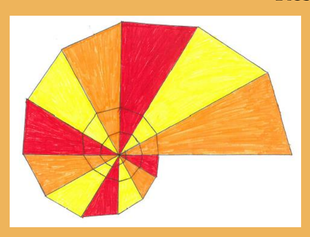
What is a spiral? A spiral is a curve that starts at a point and moves further and further away as it rotates around that point.

The successive points that divide a golden rectangle into squares are on a logarithmic spiral, which is also known as the gold spiral.



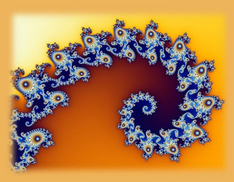
The logarithmic spiral can be constructed from equally spaced radii, starting from a point on one of the radii and drawing perpendicular to a neighbouring radius. As the number of rays increases (approaches infinity), the sequence of segments approaches the smooth logarithmic spiral.

Researcher, Ioan Fechete



Artistic View

In nature we are surrounded by symmetry and order. People are constantly trying to understand nature and its laws, to feel the cosmic rhythms, to actually understand life more deeply, in order to reach a harmony with the environment.



Mandelbrot set following a logarithmic spiral and containing Fibonacci sequences in the nodes.

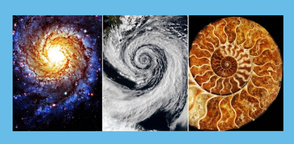
Visual artists and theorists, who have studied the proportions of animal bodies and especially the proportions of the human body, have found that the gold section is the basic geometric canon of these proportions. Leonardo da Vinci and Albrecht Durer established that the navel divides the height of the human body by the golden section and observed that the other elements of the human body are subordinated to the proportion of gold.

The artists, Liana and Pavel Bența

Common View

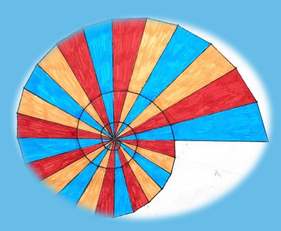
https://www.youtube.com/watch?v=_273_rnf2nA

Among the plane curves researched in mathematics are the algebraic spirals (Archimedes' spiral, hyperbolic, etc.) and pseudo spirals (logarithmic, circle evolution, etc.). Spirals have a wide application in technology, the machine building industry, telecommunications and in the execution of construction and geodetic works.



Astronomers were surprised to discover logarithmic spirals on their photographic plates: this is the shape of spiral nebulae and the tails of most comets.

artists, researcher, teachers involved in the project



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