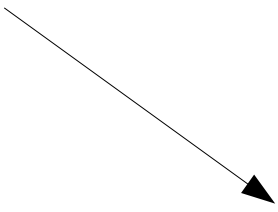
Golden Ratio

Introduction



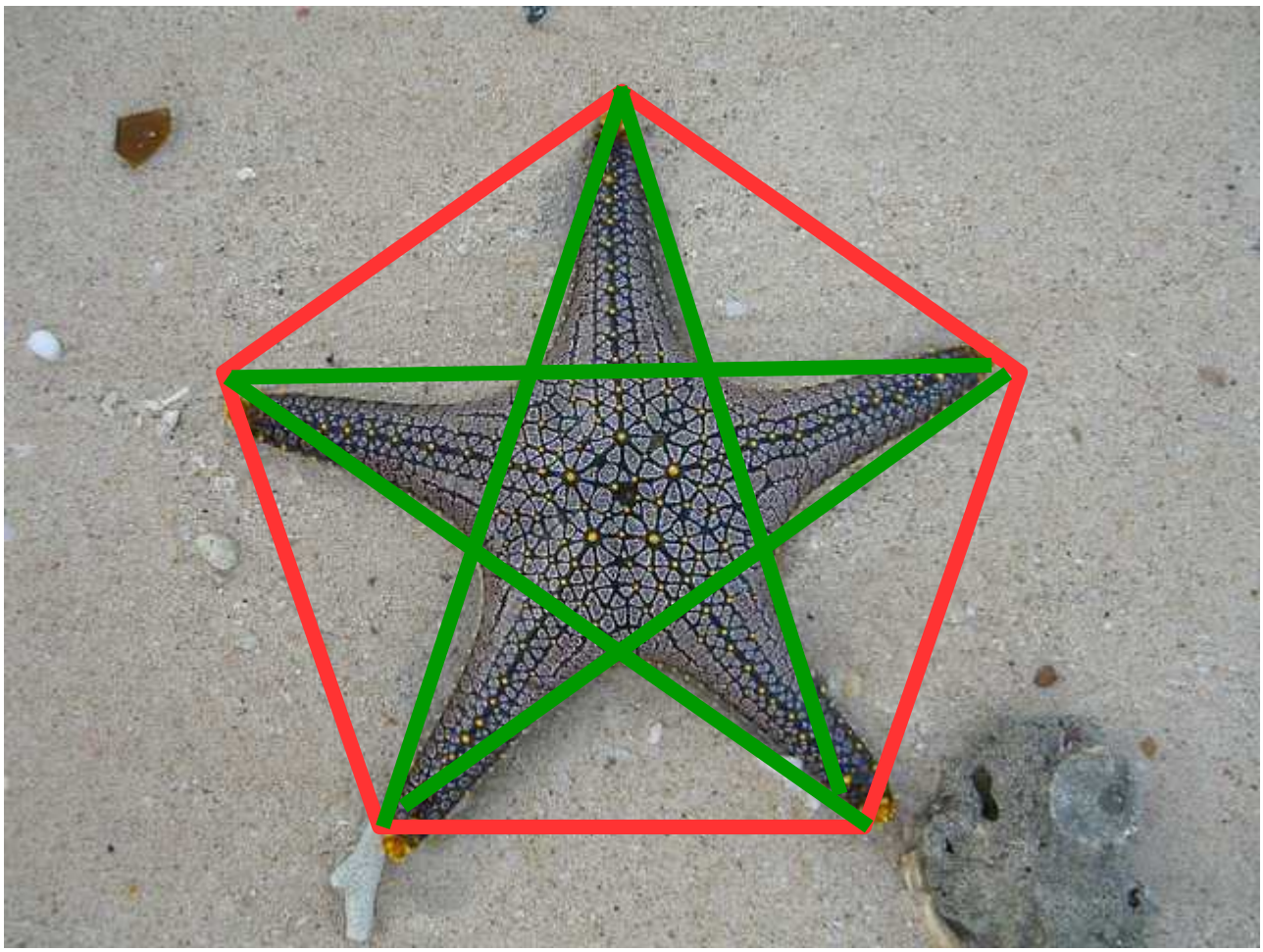
https://www.youtube.com/watch?v=kkGeOWYOFoA#t=204

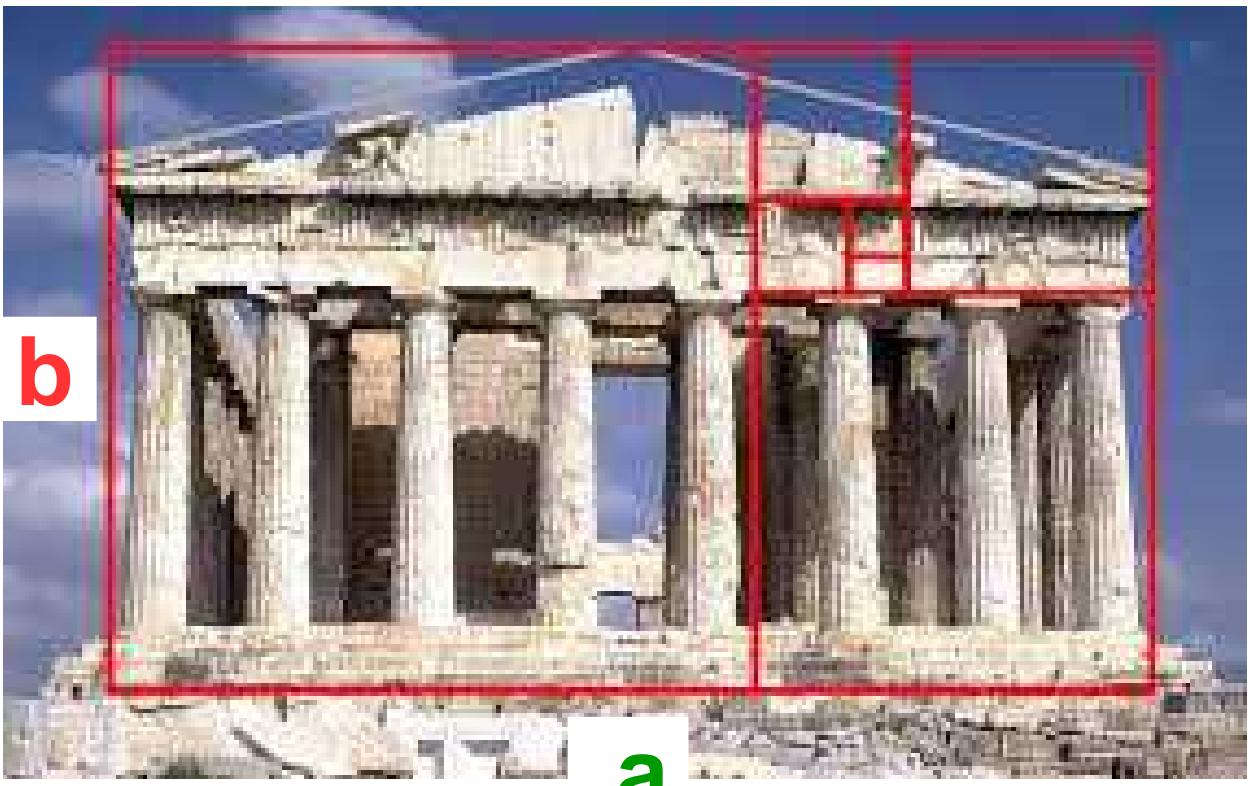
If a segment is divided in such a way that:

$$\frac{a}{b} = \frac{a+b}{a} = \varphi$$

We get the Golden Ratio which is present in nature (plants, human body, etc). **And**

φ is the golden number (**1,6180339...**)



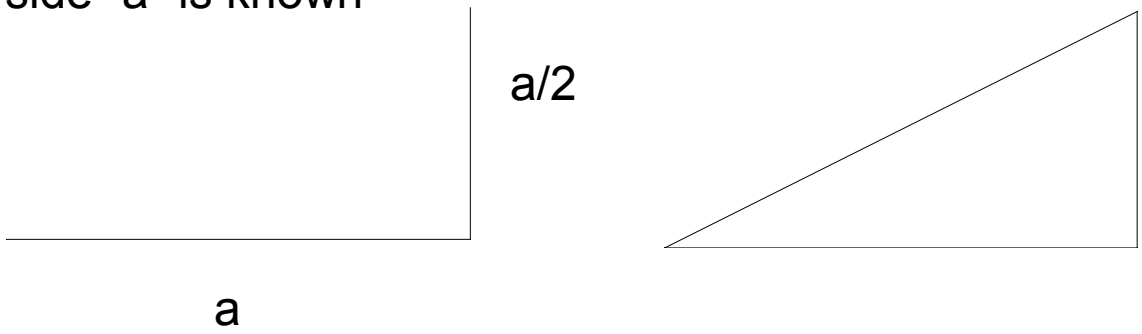


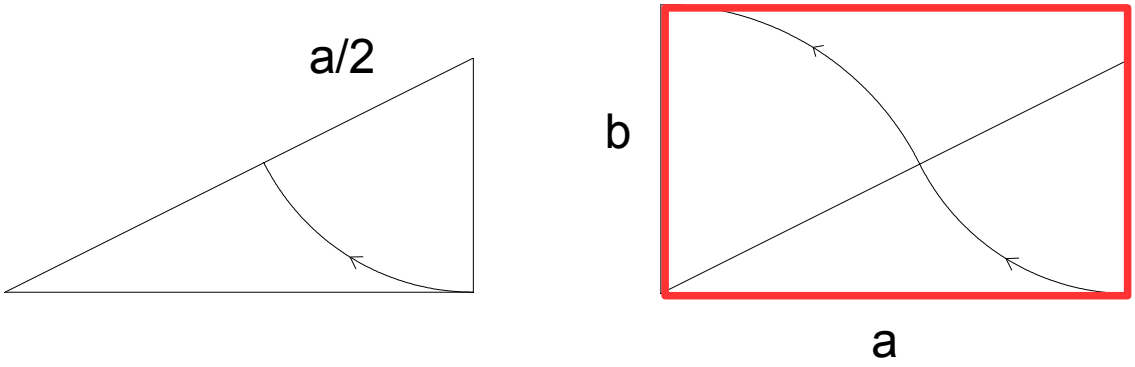
Parthenon- Athens
Built in 440 BC

$$\frac{a}{b} = \varphi$$

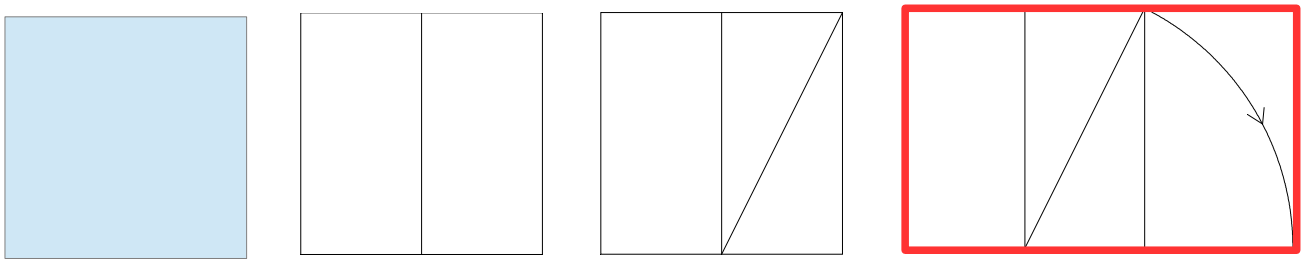
Constructions:

1 – Dividing a segment / Getting a Golden Rectangle when the large side “a” is known





2 - Getting a Golden Rectangle when the short side is known



A- Draw a square

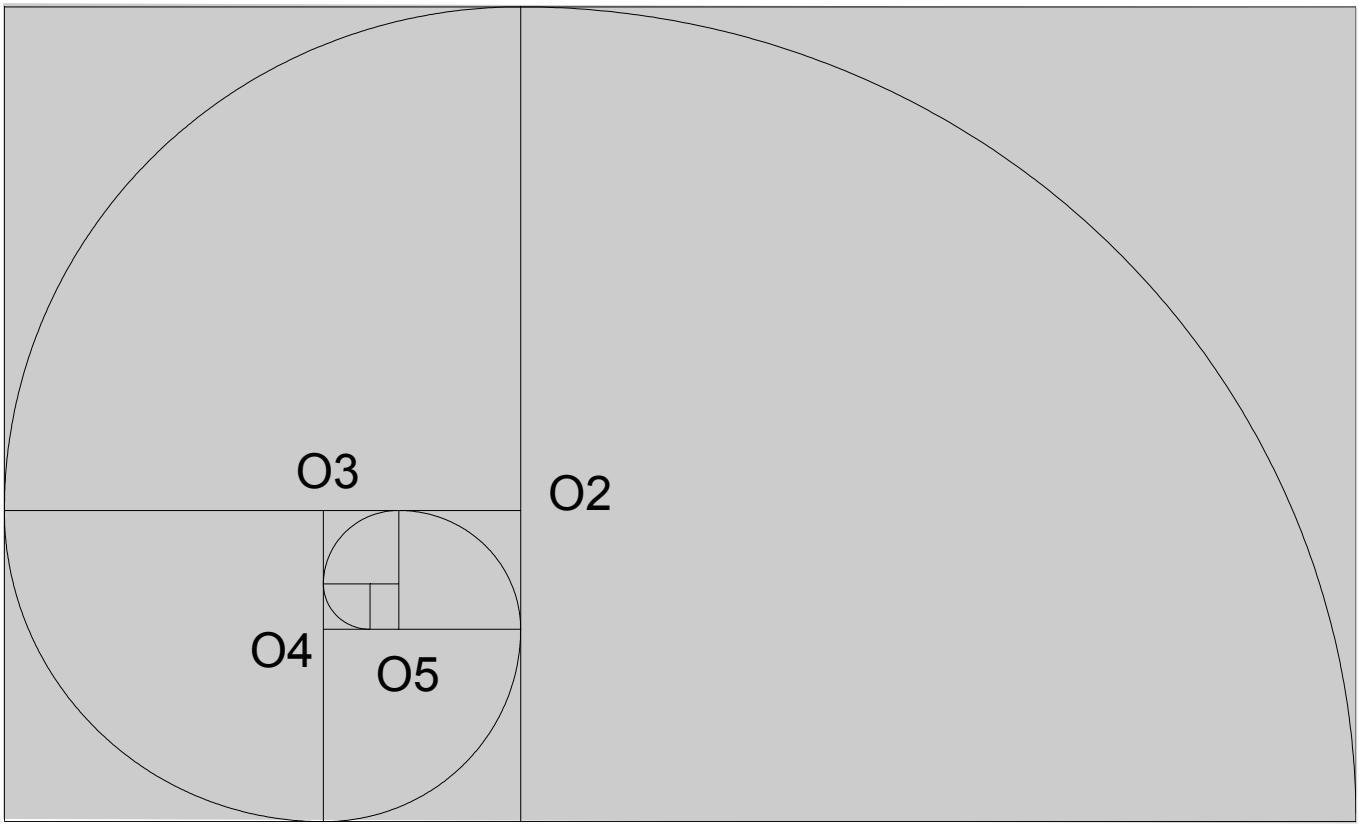
B -Divide it into two

C -Take the diagonal of one piece

D - Get the large side

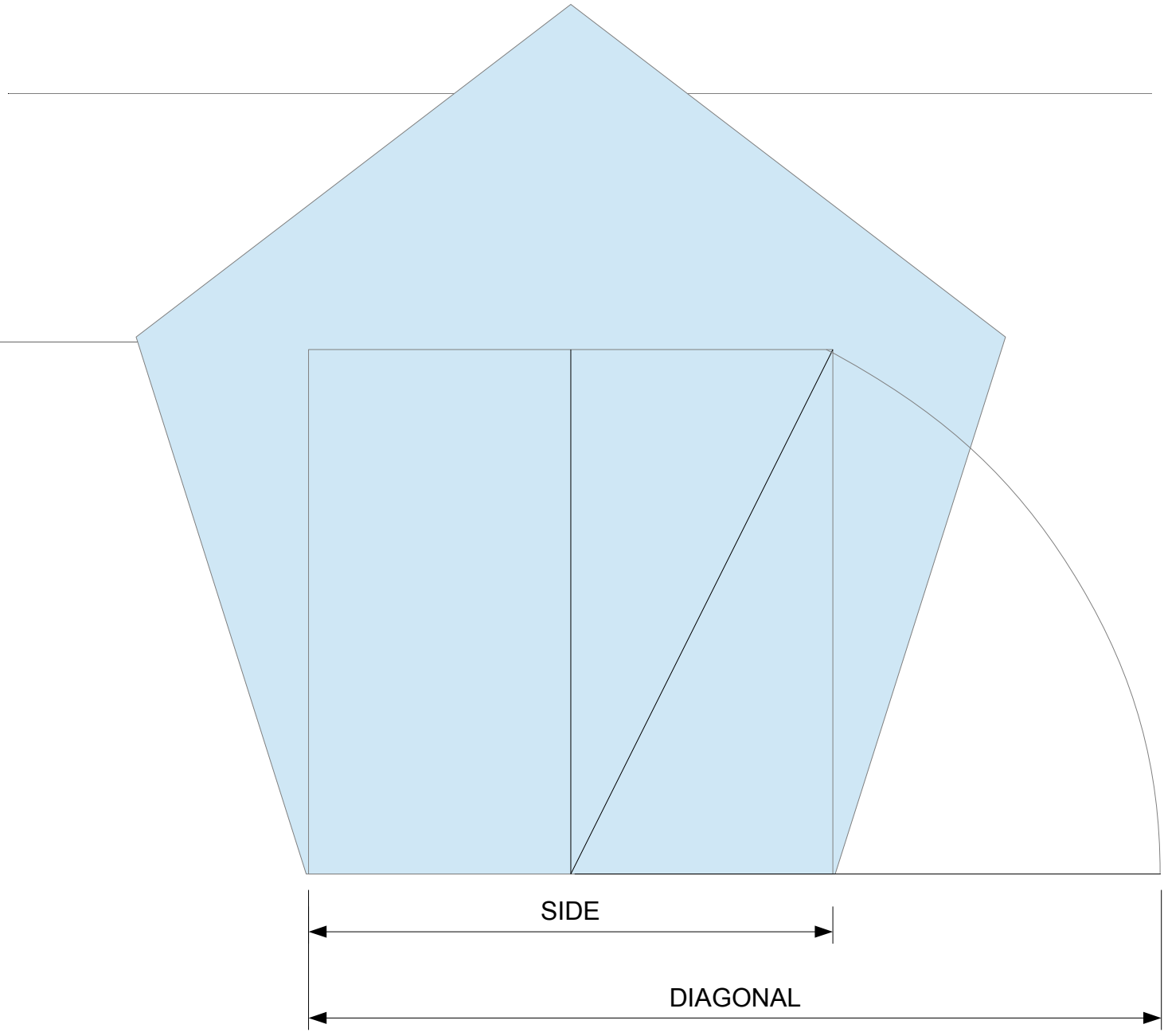
3 - Getting a Golden Spiral

Starting from a Golden rectangle, we can get a spiral by dividing successively (up to the infinite) the rectangle into a square and another Golden rectangle



O1

4 – Getting a REGULAR PENTAGON when the side is known



STAR PENTAGON