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The golden number

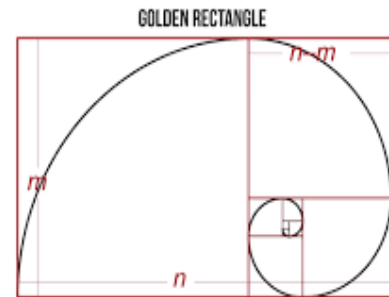
$\Phi = \frac{1+\sqrt{5}}{2} \approx 1.62$ is well known as the golden number or the golden ratio or even the divine proportion....

It is the positive solution of the **quadratic equation**: $x^2 - x - 1 = 0$

Hence we have: $\Phi^2 = \Phi + 1 \Leftrightarrow \Phi = 1 + \frac{1}{\Phi}$

If the ratio $\frac{\text{Lentgh}}{\text{width}}$ of a rectangle is equal to Φ , then it is a golden rectangle.

$$\frac{n}{m} = \Phi = \frac{m}{m-n}$$



There are examples of golden rectangle in Arts (Parthenon, “Naissance de Vénus”, “Homme de Vitruve”), in everyday life (A4 sheet of paper, credit card) or in Nature (Human body, golden spiral of the sunflowers).

In maths, Φ is also known as the limit of the ration between two consecutive numbers of the Fibonacci sequence.

