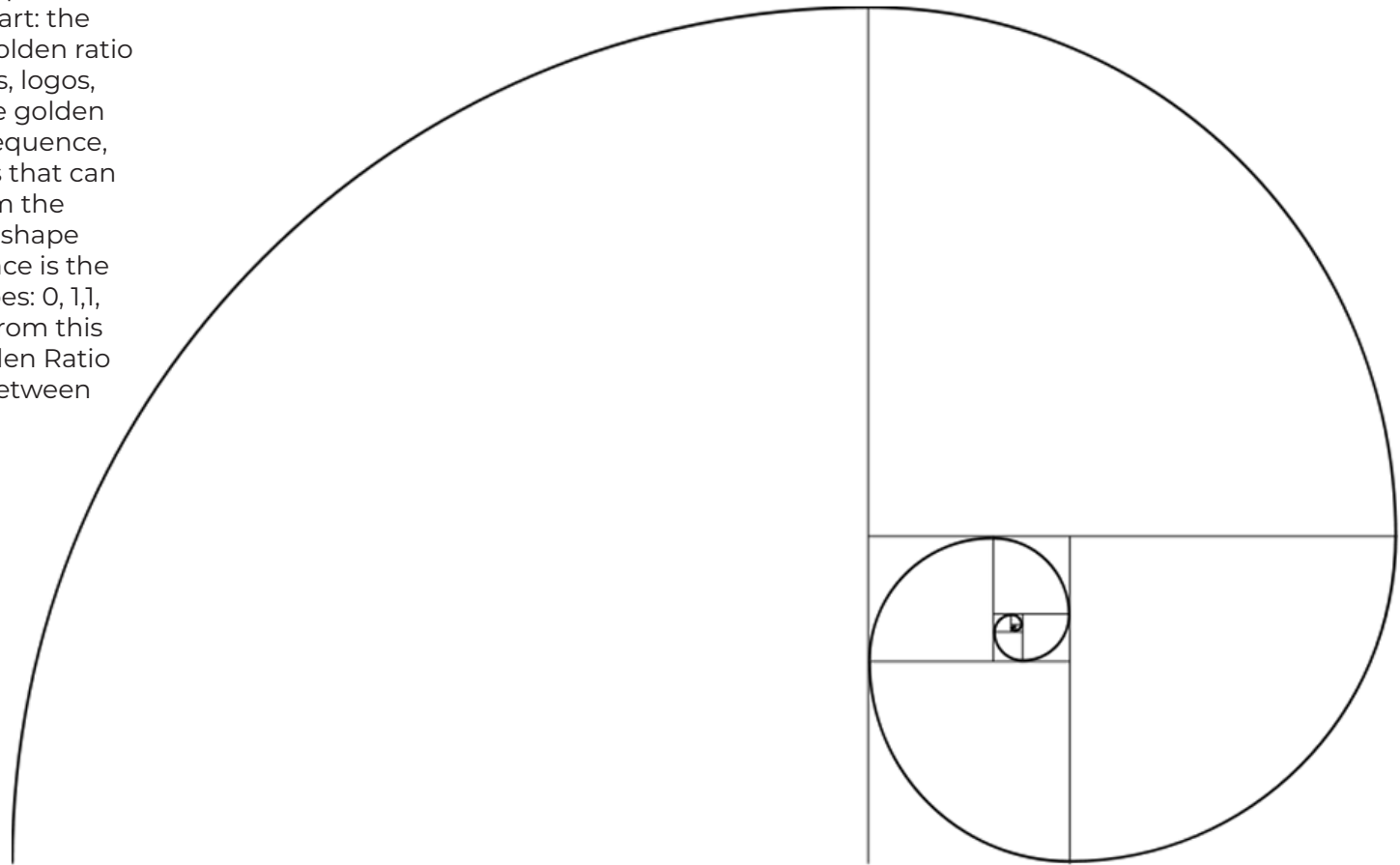# THE GOLDEN RATIO

WHAT IT IS AND HOW TO USE IT

How to use the Golden Ratio?

The golden ratio is one of the most famous irrational numbers that, much like Pi, goes on eternally. The mathematical concept is said to appear in nature and various iconic pieces of art like the Monalisa, Vitruvian man and even the Eifel tower!

The golden ratio, also known as the divine proportion, golden section or golden mean is found by dividing a line in two parts so that the long part, divided by the short part is equal to the whole length divided by the long part: the result being 1.618. In other words, the golden ratio formula can help when creating shapes, logos, and template layouts. The origins of the golden ratio itself comes from the Fibonacci sequence, a naturally occurring string of numbers that can be found pretty much everywhere, from the positioning of our facial features to the shape of spiral galaxies. The Fibonacci sequence is the sum of the two numbers before it. It goes: 0, 1,1, 2, 3, 5, 8, 13, 21, and so on and so forth. From this pattern, the Greeks developed the Golden Ratio to better demonstrate the difference between any two numbers in the sequence.

So, how does this relate to design? The golden ratio can be used in:

Typography and defining hierarchy

With Typography, the goal is to keep the font size, line height, and line width relative so that your visual result is attractive and orderly. An example of how the golden ratio can be applied to typography can be something as simple as figuring out the font size used in your design. E.g., if the body text is 8pt font, you then multiply it by 1.618 to find the best size for the header font. That means, in this case, it will be 8pt x 1.618 = 12.944 or (round it up) 13pt font. In exercising this when deciding font sizes, the hierarchal flow of your article/text begins to take shape, creating an effective visual impression. In other words, the golden ratio provides an unrivalled blueprint for flawless proportionality.

Display ——— **Best in Travel**

overline ——— First City to Visit
heading ——— **Copenhagen, Denmark**
Denmark's capital of cool is unstoppable. New-Nordic Noma
body ——— has gourmands swooning with its new digs, urban farm and
groundbreaking Scandinavian menus.

Secound City to Visit
Shēnzhèn, China
Welcome to China's most innovative city – Shēnzhèn – the
'Silicon Valley' of China. Drawn to its slew of new design

Cropping and resizing images

When it comes to the size of your images and how to crop them, the golden ratio is a fantastic tool that can help to create harmonious compositions that benefit the look of your image's content. When applying the golden ratio to your image, it will be divided into nine rectangles along with two horizontal lines, this is also known as the phi grid. In using this as your basic framework and reference for composition, you can begin to recognise how the content of your image can be optimised so that the lasting impression of your image is more dynamic.

Layout

The layout of a web page, business card, or a poster the composition and layout of its different elements can be challenging. After all, it is important that our visual promotions are eye catching and satisfying to look at. The golden ratio proves itself to be a useful tool when attempting to compile numerous features into a singular layout. Any designer can use its general guideline to make tweaks to improve the overall feel of whatever project they may be working on. The golden ratio, in this case, simply ensures that multiple aspects of a design work harmoniously together.
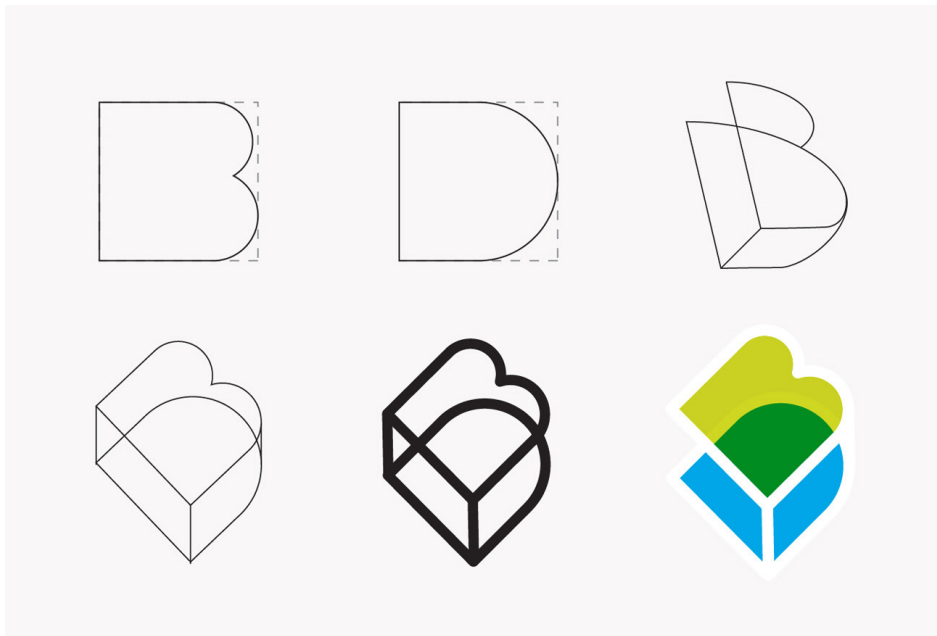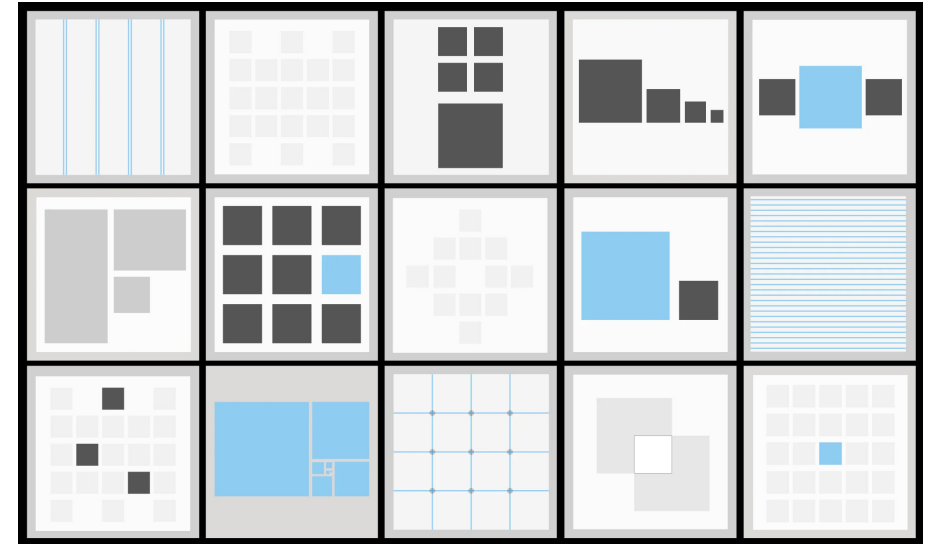
Logo Development

A well-devised logo is essential to your business so that people can understand your core message at a singular glance. This is why it's a good idea to make use of the Golden Ratio when designing a logo so that customers and potential clients are instantly drawn in and are encouraged to connect with your brand. In truth, many successful, well-known businesses such as Apple, National Geographic and Google make use of the golden ratio for their brand effectiveness.

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