The topic of the infographic is Mathematics in Architecture. In my opinion, we use math in architecture on a daily basis to solve problems. We use it to achieve both functional and aesthetic advantages. As you will see from some of the examples below, the application of mathematical principles can result in beautiful and long-lasting architecture which has passed the test of time. Mathematics has various roles in architecture. In the ancient Egypt in 300 B.C., architects used the Golden Ratio to design proportions in buildings that look pleasing to the human eyes and feel balanced. For example, the Parthenon is a temple built on the Acropolis in the 5th century BC for the Greek goddess Athena. It appears to use golden ratio in some aspects of its design to achieve beauty and balance its design.

The golden ratio is an irrational number where a line can be divided such that the long segment divided by the short segment is approximately 1.618. Also, the sum of the lengths of the segments divided by the longer segment is approximately 1.618.

For the Great Pyramid of Khufu if we take a cross-section through a pyramid we get a triangle which was called Egyptian Triangle. The strength of a triangle derives from its shape, which spreads forces equally between its three sides. Triangles are stable, as they are inherently rigid, the three sides mutually reinforcing each other. That’ s why the pyramid lasts long.

The above examples show that architecture and mathematics seem to have few obvious connections, but despite the apparent differences, the distance between the profession of architecture and the discipline of mathematics, and between an object of design and a subject of study is far less than many would assume.