## Mathematics: History And Importance

Firstly, let's take a look at the origins of mathematics:

How did mathematics come about? Where did it first start? For many who are well versed in the origins of mathematical thought, the evolution of mathematics will reveal itself to a continuous and ever-refining (and growing) set of expressions of subject matter. Visit: <u>Maths Globe Uk</u>



A step up from the first abstraction the ability to consider and to perceive abstract non-physical quantities such as time and elementary arithmetic. One does not have to see actually see that 3 objects subtracted from 4 objects is 1 object. From there, it is only natural that subtraction, multiplication and division began.

In fact, mathematics precedes written written script and communication and there are records of primitive methods of counting including knotted strings or tallies. Numerical systems go as far back as the Egyptians and Ancient Chinese. They were used for everything from daily life (painting, weaving, recording time) to more complex mathematics that involved arithmetic, geometry and algebra for financial considerations such as taxation, trading, construction and time. On the subject of time, this was often based on astronomy as well.

The ancient Egyptians and Babylonians were skilled at employing mathematics and it is actually speculated that the pyramids were more than the tombs of ancient kings long dead; the pyramids are also the first computers. It was said the dimensions and alignment of the pyramids assisted the ancients in conducting complex calculations much like how we might use a log table before the widespread use of calculators.

But where did the actual academic study of mathematics begin? Mathematics as we know it with geometry, vectors, differentiation, integration, mechanics, sequences, trigonometry, probability, binomials, estimation, hypothesis testing, geometric and exponential distributions and hyperbolic functions (to name a few off the top of my head) began in ancient Greece as far back between 600 BC to 300 BC.

From it's humble origins of tied knots, mathematics has been extended into science and has been of immense benefit to both fields of study. In fact, it is said that he who does not know mathematics cannot fully appreciate the beauty of nature. I would go so far as to say that there is no truth without mathematics. Anything without a number is merely an opinion. What we consider qualitative measurements are really quantitative ones that have exceeded a certain threshold after which we impart a certain label. For example, when we say a drug works, what we really mean is that 70% of people who were administered a certain dosage of the drug over a specific period of time experienced perhaps 90% reduction in the severity of their symptoms.

Our threshold of saying that "a drug works" is therefore, 70%.

To give you an idea of how the world of mathematics has expanded in recent years, I shall conclude this article with a quote from the Bulletin of the American Mathematical Society: