Term paper on geometry of stonehenge

Introduction Marcello (2002) define Stonehenge as a prehistoric monument found in the UK and its one of the most famous sites in the entire world. Stonehenge of Geometry has been very crucial in helping discover various Mathematical truths. Its design shows the elegant and symbolism of numbers and geometry. Several years back surveyors and engineers understood and used this mathematical concept in construction of houses. Many of the Neolithic ancestors used the knowledge of geometry in building Stonehenge. This is to mean that the mathematics which was used by that time in building showed much of the geometrical form of the stones. This was evidenced in the construction of the height, width, orientation and the distance apart. Body According to many researchers, the Stone Age buildings used very sophisticated knowledge of geometry which was actually a counter of Pythagoras. However, studies show that most of these builders derived the geometry knowledge from the Pythagorean geometry many years before the Pythagoras. In addition, other scholars argue that Stonehenge was designed and built using advanced geometry. This is to imply that the discovery of the knowledge on geometry had many implications especially in understanding the monument. Thus, for many builders to understand this geometry they had learned much hundred years before via the construction of other simpler monuments. An outstanding example can be represented by the diagrams shown below (Anthony, 2008).

One of the greatest achievement of the complex geometry during the Stonehenge was a circle of diameter 87-metre which was a chalk-cut pits with mark points of a 56-sided polygon. Computer analysis has been in use to illustrate that this polygon was laid during building using both square and

circle geometry. Many surveyors of the time accomplished this by using a rope whereby they used it to create a circle. This was then followed by lying out of four corners of a square on the circumference of the circle. This was done before laying another similar square as a result it helped in creating an inner octagon. The octagons created were known used as anchors for the rope which was thus used to mark the arcs which intersected the circumference creating a polygon. This can be illustrated using the following diagrams (David, 2008).

On the other hand, Physicist asserted that Stonehenge was constructed with respect to geometric harmonics of light which accompanied the 56 holes encircling the center. Nevertheless, large stones are said to be crystalline thus they emit a certain electromagnetism. This could be explained by the function of interlocking geometrics and interconnecting energy fields. Therefore, it is clear that during Stonehenge period, various elements applied the concept of geometry. Geometry was also applicable in the Stonehenge in explanation of the sun rises over Heel stone viewed during the summer solstice from the center. It made assumptions that as the sun arise and sets it makes a complete circle which can thus be constructed using geometry. Various points of the construction can measured using a protractor thus enabling one to give the dimensions of the sun at a particular point of its circle in degrees. This clearly shows that during Stonehenge people had enough knowledge to make predictions using geometry to emphasize the position of the sun during the summer solstice. This can be illustrated using the diagram below.

Moreover, Stonehenge utilized geometry in the design of various prehistoric

sites. An outstanding example is the European megaliths which applied much of mathematics principles. The site utilized geometry measurement referred to as the megalithic yard. The basement of this construction of this cites borrowed much from Pythagoras. It made practical use of geometry knowledge and various geometry designs came up. The orientation of the stones to make the foundation of the sites used three dimensional geometry of length, width and height. The stones where fixed upright forming a sarsen circle with the center of gravity being a third of the floor. This was done to ensure that the right dimensions existed for the site. Nevertheless, the roofing also meant use of geometry knowledge where by triangular shaped structure was constructed with circular rings to make the site to look beautiful. The following diagrams show some of these constructions used to make the prehistoric sites in Europe (Marcello, 2002).

Fig(i) Stone foundation Fig(ii) The full construction of the site

Conclusion In conclusion, it's clear from the report that Stonehenge made several applications of geometry in most of their undertaking. It helped people of the time to make various discoveries about the truth of mathematical geometry. In so doing, they were able to make various conclusions on why certain activities occur basing their argument on facts about geometrical mathematics. Builders and surveyors where able to come up with various buildings using geometry alignments which have stood up to the 21st century. This is an implication that the application of geometry in building and construction helped to come up with very strong and beautiful structures which are even used today by scholars. Nevertheless, Stonehenge people through the application of geometry where to make various

predictions about the position of the sun during various times of the year. Finally, geographers where able to use geometry during the Stonehenge to come up with different maps of the entire world. An outstanding example being the England alignments which composed of maps of various areas. Since this period, mathematics of geometry has grown to greater heights and it's now being use to several other appliances all over the world. This is to imply that the geometry of Stonehenge paved way for the growth and development of geometry.

References

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