

Bod gna' rabs riggnas khrod kyi grangs rig bsam blo'i 'du shes yang bskyar gleng (Mathematics in ancient Tibetan culture)

Gu ru ji

Tibetan intellectuals and ordinary Tibetans developed a form of mathematics in accordance with the environment they inhabited. This paper will examine the distinctive characteristics of Tibetan mathematics.

A. Recording figures and counting in ancient Tibet

1. Using wood, rope and small stones to indicate numbers
2. Using fingers for simple calculations such as addition, subtraction, multiplication and division.
3. Using sand-bowls (*rtsis gzhong*) for similar simple calculations.
4. Using the linear measures *rgyang grags* and *dpag tshad* to define length.

B. The use of mathematics in ancient Tibetan technology

1. Using mathematics for building walls.
2. Using mathematics for bridge-building.
3. Using mathematics for building palaces.
4. Using mathematics for the construction of stupas.
5. Using mathematics for *thangkha* painting.

C. The use of mathematics in ancient Tibetan astrology

1. *Dgu tha*
2. *Bcu 'dril grangs grangs gnas*
3. *Dbyibs rtsis*

D. Conclusion

While the remarkable Tibetan civilisation has been a subject for research by scholars throughout the world, the subject of Tibetan mathematics has been relatively neglected. The present paper will attempt to address this deficiency through a discussion of these aspects of Tibetan mathematics.