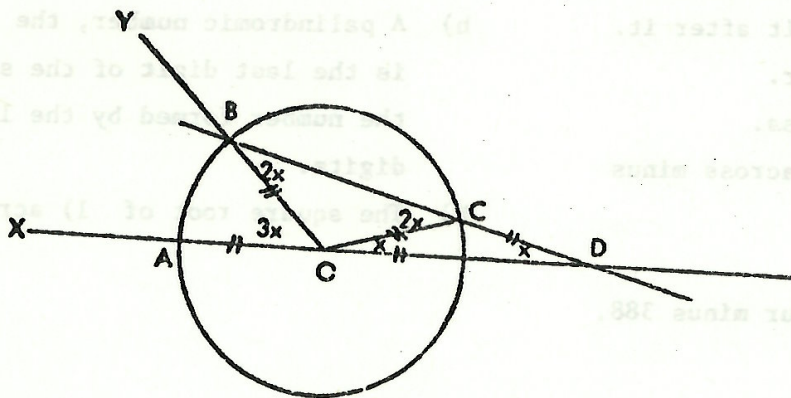


## TRISECTION OF AN ANGLE

It is a well established fact that it is impossible to trisect a general angle using Euclidean tools, i.e. compass and straightedge only. The discussion of this and other famous problems can be found in the classic book "Famous Problems of Elementary Geometry" by Felix Klein (Dover Publication) and in the Appendix 3 of "An Introduction to the Foundations and Fundamental Concepts of Mathematics" by H. Eves and C.V. Newson (Holt, Rinehart and Winston, NY, 1965).

A very good approximate construction was published in PARABOLA, Vol. 14 No. 3 (1978). On the other hand if we "improve" slightly our straightedge by allowing markings on it, we can always trisect any angle. This is called "Archimedes' Ruler Method" and is illustrated below. The diagram is taken from the Ontario Secondary School Mathematics Bulletin showing how a schoolboy, Danny Shoskes, found this construction by himself.

The proof is very simple, I trust you can do it. Can you describe the precise method of construction?



*Archimedes' Ruler Method*