A TYPICAL GEOMETRY LESSON

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TARGET AUDIENCE:
Further Education & Training (Gr 12)

DURATION: 2 hours

MAXIMUM NUMBER OF PARTICIPANTS: 50

MOTIVATION FOR THE WORKSHOP
Very few teachers know how to guide learners through the problem solving process. During this workshop participants will be taken step by step through the process.

Description of content of workshop
A theorem will be proved and an example of problem solving will be tackled.

The activities and worksheets to be used in the workshop

Participants will be provided with a hard copy of a problem that will be solved during the session (one page only). All the material is in digital format and a data projector will be used. Each participant will have the opportunity to mark his/her own diagram. Each participant will be provided with a DVD containing the whole lesson.

ABSTRACT

Many problem solving skills are learned in the process of studying Euclidean geometry. Not only do students develop considerable mental discipline, but at the same time their creativity is also boosted. When struggling to find a proof for a problem, one needs to be creative in the attempt to look for different routes when one route after the other fails. At tertiary level, students who have not mastered these skills will find the study of mathematics a daunting task. While it is true that the majority of learners will not benefit in later life from studying Euclidean geometry, our concern is with delivering the future engineers, architects, scientists, actuaries and so forth for our country. These are the learners that need to be equipped for studying mathematics at tertiary level. No other disciple is better equipped than Euclidean geometry to develop a student's deductive reasoning ability.

Many people claim that "geometry cannot be taught. Either the student can do it (innate ability) or he/she can't. In the latter case, it is a waste of time trying to teach him/her." We beg to differ. In this workshop we will attempt to demonstrate how problem solving can be taught.

Brown, R. & Brown, P.R. (2013). A typical geometry lesson. In Z. Davis & S. Jaffer (Eds.), *Proceedings of the 19th Annual Congress of the Association for Mathematics Education of South Africa*, Vol. 2. (p12). Cape Town: AMESA.