English for Mathematicians, UNIcert® III

PART TWO

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WRITTEN PRODUCTION

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Assignment sheet

Candidate's Number:

Name:

Surname:

Date:

Candidate's Signature: _____

90 minutes / 40 points

SUBTEST E

Choose one of the following three topics A, B or C and write an academic essay of 350 – 400 words.

Topic A

Are students learning enough science (including mathematics) in high school? Argue for or against an expanded science requirement in secondary schools.

Topic B

How can teachers of mathematics benefit from using the Internet and computers?

Topic C

If an alumnus donated a large sum of money to your university, how do you think that money should be spent? Write an essay convincing university officials to allocate the money in the way you think is best for the university.

SUBTEST F

Choose one of the following three topics D, E or F and write an essay of 200 – 250 words on a mathematical topic.

Topic D

Logarithms help to shrink the numbers of very high magnitude to smaller ones which computers and our brains can deal with easily. Explain what logarithms are and give examples of how logarithms are used in computer or natural sciences, or in the everyday world.

Topic E

Study the visual representation of a proof of a theorem. Interpret and describe the proof mathematically using appropriate terminology.

Cosine of the Difference

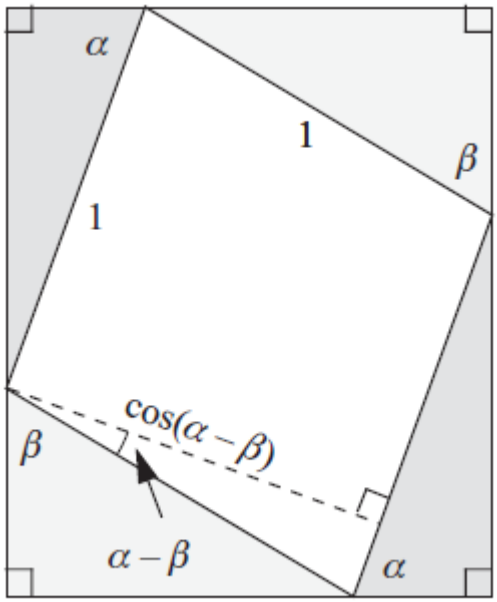

Fig. 1

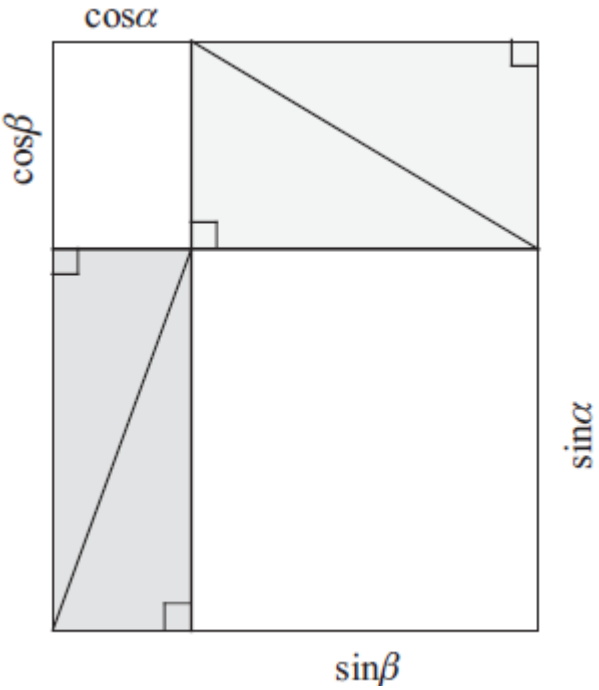

Fig. 2

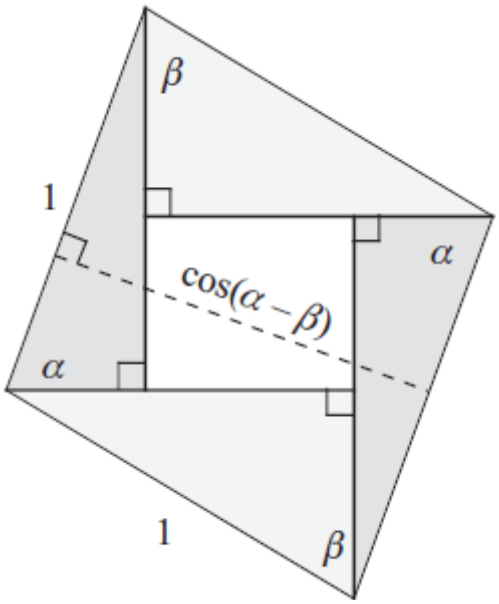

Fig. 3

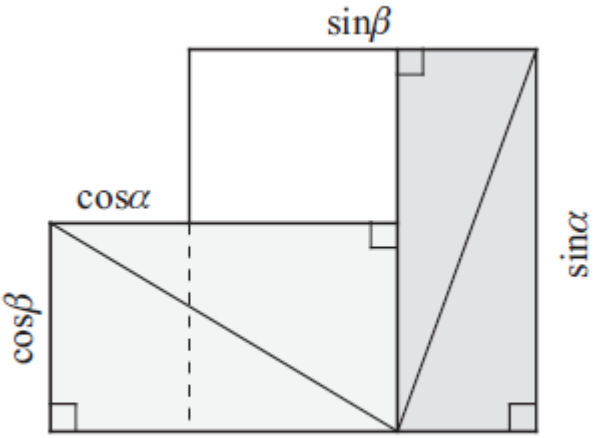

Fig. 4

Topic F

Using Figure 5 and/or 6, formulate the fifth postulate of Euclidean geometry. Explain its relation to non-Euclidean geometries.

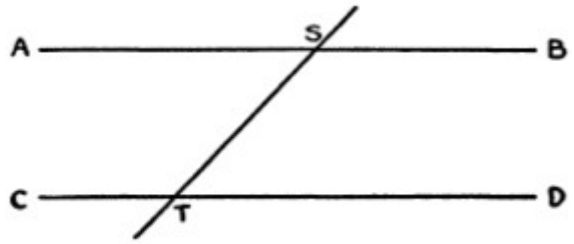

Fig. 5

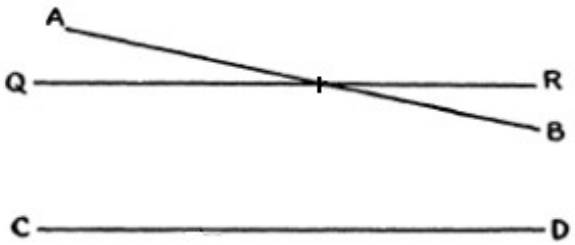

Fig. 6