UNIVERSITY OF SWAZILAND
FACULTY OF EDUCATION
SUPPLEMENTARY EXAMINATION PAPER 2011/2012

TITLE OF PAPER: CURRICULUM STUDIES IN MATHEMATICS

COURSE CODE: EDC 281

PROGRAMME: B.ED 2 & PGCE

TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS: ANSWER ANY **FOUR** QUESTIONS. EACH QUESTION IS WORTH 25 MARKS.

PROVISIONS: SGCSE Syllabus 2011-2012 & GRAPH PAPER. DO NOT WRITE ON THE SYLLABUS PROVIDED.

THIS PAPER CONTAINS 5 PAGES. DO NOT OPEN UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR

Question 1
(a) Write **five** reasons for each of the following:
   (i)   Preparing a scheme of work   [5]
   (ii)   Preparing a lesson plan   [5]
(b) List **eight** of McCombs (2001)'s learner-centred principles that define learner centred education.   [8]
(c) In the SGCSE syllabus the psychomotor domain can apply in the learning of Geometry. Explain with examples from topics 9, 10 or 11 of the syllabus. [7]

Question 2 (page 3)

Question 3
(a) State and explain **five** learner- centred methods of teaching and learning   [10]
(b) Write a learner-centred activity for teaching the method of completing the square of a quadratic expression.   [15]

Question 4
Write an essay to support or refute the statement "The Swazi traditional setting encourages the use of behaviourism in teaching"   [25]

Question 5
Write an essay to support or refute the statement "Mixed ability teaching is the best way to deliver the SGCSE mathematics curriculum in the Swaziland government schools"   [25]
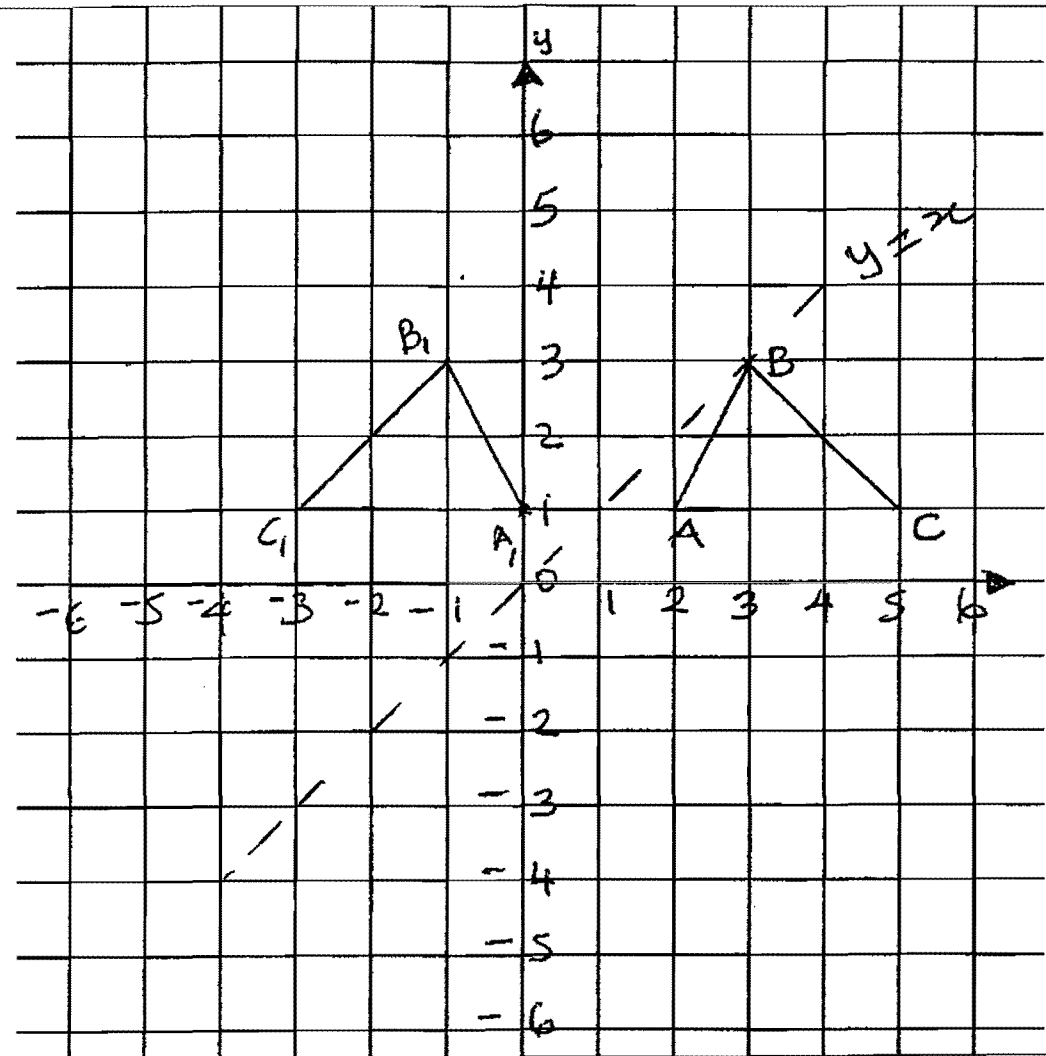
Question 2

Below learner responses to **two** different tasks are provided. Read each task and the learner responses.

Task	Learner's Response
1. The actual distance between Cairo and Khartoum is 1580 km. On a different map this distance is represented by 31.6 cm. Calculate, in the form 1 : n, the scale of this map.	1. $1 : n$ $31.6 : 1580\ 000$ $\dfrac{31.6n}{31.6} = \dfrac{1580\ 000}{31.6}$ $n = 50\ 000$ Answer $1 : 50\ 000$

2.

(a) Draw and label x and y axes from −6 to 6, using a scale of 1 cm to 1 unit. [1]

(b) Draw triangle ABC with A (2,1), B (3,3) and C (5,1). [1]

(c) Draw the reflection of triangle ABC in the line y = x. Label this A1B1C1.

(a) Work out a solution to each task. [4]

(b) Respond to the following questions/task prompts by writing your responses into a copy of the table provided. [21]

Read each task provided to the learner and analyze the learner's responses to the task. Then copy the task prompts below and write your response to each of the learner's tasks.

Task	1	2
Based on the task and learner responses, list the content knowledge and skills learners would need in order to create a quality response to this performance task		
Analyze the **two** learner responses and write a synthesis of the learner's strengths and weaknesses. Be sure to address learner's understanding of the content knowledge and skills you identified, and provide specific examples from each task.		
Write constructive feedback to the learner on each of the **two** tasks regarding their understanding of content knowledge and skills. Support your feedback with specific examples from the learner's work.		