

Tutorial letter 101/0/2018

Teaching Mathematics

LADMMM6

Year Module

Department of Mathematics Education

IMPORTANT INFORMATION:

This tutorial letter contains important information
about your module.

BARCODE

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1. INTRODUCTION

Dear Student

1.1. Welcome

Welcome to the module Teaching Mathematics (LADMMM6). We trust that you will find this module interesting and challenging. The aim of this module is to equip you with the necessary knowledge, skills and attitudes in order to enable you to facilitate the learning of mathematics with the confidence and expertise.

Success in this module will be attained if you start studying early in the year and determined to do the assignments properly, as well as taking examinations seriously. You will receive a number of tutorial letters during the year. A tutorial letter is our way of communicating with you about teaching, learning and assessment. This tutorial letter contains important information about the scheme of work, resources and assignments for this module. We urge you to read it carefully and to keep it at hand when working through the study material, preparing the assignment(s), preparing for the examination and addressing questions to your lecturers.

In this tutorial letter (101), you will find the assignments and assessment criteria as well as instructions on the preparation and submission of the assignments. It also provides all the information you need with regard to the prescribed study material and other resources and how to obtain them. Please study this information carefully and make sure that you obtain the prescribed material as soon as possible.

Right from the start we would like to point out that you must read all the tutorial letters you receive during the year immediately and carefully, as they always contain important and, sometimes, urgent information.

We hope that you will enjoy and benefit from this module. We wish you all the best.

1.2 Tutorial matter

You should have received an inventory letter telling you what you have received in your study package and also showing items that are still outstanding. Also see the brochure entitled *Study @ Unisa*.

Some of this tutorial matter may not be available when you register. Tutorial matter that is not available when you register will be posted when a need arise. All tutorial letters will be available on *myUnisa*.

For this module, the Dispatch should supply you with the following study material at registration:

- Tutorial Letters 101 and 301
- Tutorial letter 501

Apart from Tutorial Letters 101 and 301, you will also receive other tutorial letters during the year. These tutorial letters will not necessarily be available at the time of registration, but will be dispatched to you as soon as they are available or needed (for instance feedback on assignments).

You can view the study guides and tutorial letters for the modules for which you are registered on the university's online campus, myUnisa, at <http://my.unisa.ac.za>.

2 PURPOSE OF AND OUTCOMES OF THE MODULE

2.1 Purpose

The course is structured around seven study units. We shall describe each of these study units in terms of learning outcomes which are provided at the beginning of each study unit in the Study Guide.

The outcomes of the different study units are as follows:

2.1.1. Unit one: Exploring what it means to do mathematics.
--

After studying this unit, you should be able to:

- discuss critically the thinking that the traditional approach to teaching mathematics rewards the learning of rules, but offers little opportunity to do mathematics.
- explain the phrase "mathematics is a science of pattern and order".
- evaluate a collection of action verbs that is used to reflect the kind of activities engaged by the learners when doing mathematics.
- compile a list of features of a classroom environment considered as important for learners engaged in doing mathematics.
- think about appropriate and interesting activities to help learners explore the process of problem-solving through number patterns and logical reasoning.

2.1.2. Unit two: Developing understanding in mathematics

After studying this unit, you should be able to:

- critically reflect on the constructivist approach as an approach to learning mathematics.
-
- motivate, with understanding, the need for a shift in thinking about mathematics instruction.
- critically reflect on the value of teaching with problems.
- select and analyse appropriate tasks and problems for learning mathematics.
- describe, with insight, the three-part lesson format for problem-solving referred to as before, during and after.
- critically describe the teacher's actions in the before, during and after phases of a problem-solving lesson.

- competently select and design effective problem-based lessons from the textbook and other resources.
- explain competently how problem-solving goals are developed while students learn.

2.1.3. Unit three: Teaching through problem-solving

After studying this unit, you should be able to:

- motivate, with understanding, the need for a shift in thinking about mathematics instruction.
- critically reflect on the value of teaching with problems.
- select and analyse appropriate tasks and problems for learning mathematics.
- describe, with insight, the three-part lesson format for problem-solving referred to as before, during and after.
- critically describe the teacher's actions in the before, during and after phases of a problem-solving lesson.
- competently select and design effective problem-based lessons from the textbook and other resources.
- explain competently how problem-solving goals are developed while students learn

2.1.4. Unit four: Planning in the problem-based classroom

After studying this unit, you should be able to:

- describe the step-by-step process of **planning** for a problem-based lesson.
- write out a well thought out and concise lesson plan based on a problem-based strategy.
- critically discuss some **variations** of the three-part lesson.
- discuss how workstation activities or games can be profitably and meaningfully used to enhance a problem-based lesson.
- discuss the effective use of group work.
- explain the differences between competitive learning, individualistic learning and collaborative learning.
- discuss the effective use of collaborative/cooperative learning.

- plan for reaching **all learners** through effective problem-solving strategies – to be used in an increasingly diverse classroom.

2.1.5. Unit five: Building assessment into teaching and learning

After studying this unit, you should be able to:

- explain the term assessment.
- identify four purposes of assessment.
- explain the principles of assessment.
- describe the role and purpose of assessment in mathematics.
- implement a variety of types of assessment in assessing your learners' performance in mathematics.
- identify and explain the aspects of mathematics learning you ought to consider when assessing learners.
- reflect on the assessment potential of mathematical tasks used in the teaching of basic data handling concepts.
- select appropriate methods, techniques and tools for assessing a learner's performance in mathematics.
- draw up or design your own assessment tasks and rubrics to be used when assessing a learner's work.
- compare various methods of recording a learner's performance.

2.1.6. Unit six: Exercises on teaching data handling

This study unit endeavours to introduce you to the section in data handling.

After studying this unit, you should be able to:

- differentiate between the two forms of numerical.
- represent data in a variety of forms, including tables, pictograms, bar graphs and pie charts.
- collect and interpret data.
- recognise misleading representations of data.

2.1.7. Unit 7: Exercises on transformation geometry

This study unit endeavours to give you a glimpse of transformation geometry.

3 LECTURER(S) AND CONTACT DETAILS

3.1 Lecturer(s)

Lecturer: Ms MM Masilo
 Office: AJH Building office 7-42
 Contact: (012) 429 6154
 E-mail: masilmm@unisa.ac.za

3.2 Department

All queries that are not of a purely administrative nature **but** are **about the content of this module** should be directed to us. Please have your study material with you when you contact us. E-mail and telephone numbers are included above but you might also want to write to us. Letters should be sent to:

The module coordinator (LADMMM6)
 Department of Mathematics Education
 PO Box 392
 UNISA
 0003

3.3 University

If you need to contact the University about matters not related to the content of this module, please consult the publication *Study @ Unisa* that you received with your study material. This booklet contains information on how to contact the University (e.g. to whom you can write for different queries, important telephone and fax numbers, addresses and details of the times certain facilities are open).

Always have your student number at hand when you contact the University.

Please note that all administrative enquiries should be directed to **UNISA**. Enquiries will then be channeled to the correct department. The details are as follows:

- Fax number (RSA) 012 429 4150
- Fax number (international) +27 12 429 4150
- E-mail study-info@unisa.ac.za

4 MODULE-RELATED RESOURCES

4.1 Prescribed books

Your prescribed textbooks for this module for this year are:

(1) Any set of mathematics textbooks for Grades 7 to 9.

Please consult the list of official booksellers and their addresses listed in *Study @ Unisa*. If you have any difficulty obtaining books from these bookshops, please contact the Prescribed Books Section at telephone 012 429 4152 or email vospresc@unisa.ac.za

4.2 Recommended books

There are no recommended books for this module.

It is recommended that you consult the curriculum documents (NCS-CAPS documents) related to mathematics field of study approved by your Department of Education.

4.3 Electronic Reserves (e-Reserves)

There are no e-reserves for this module.

4.4 Library services and resources information

You will be required to provide your login details, namely your student number and myUnisa password, in order to access the library's online resources and services. This will enable you to:

- view or print your electronic course material
- request library material
- view and renew your library material
- use the library's e-resources

5 STUDENT SUPPORT SERVICES FOR THE MODULE

For information on the various student support systems and services available at Unisa (e.g. student counselling, tutorial classes, language support), please consult the publication *Study @ Unisa*, which you received with your study material.

5.1. Contact with fellow students

5.1.1. Study groups

It is advisable to have contact with fellow students. One way to do this is to form study groups. The addresses of students in your area may be obtained from the following department:

Directorate: Student Administration and Registration
PO Box 392
UNISA
0003

5.2 myUnisa

If you have access to a computer that is linked to the internet, you can quickly access resources and information at the university. The *myUnisa* learning management system will help you to communicate with your lecturers and with other students.

To go to the *myUnisa* website, start at the main Unisa website, <http://www.unisa.ac.za>, and then click on the “Login to *myUnisa*” link on the right-hand side of the screen. This should take you to the *myUnisa* website. You can also go there directly by typing in <http://my.unisa.ac.za>.

5.3 Discussion classes

There are no discussion classes for this module.

5.4 Tutorials

Unisa offers tutor services for students as additional academic support at the various Unisa regional learning centres throughout the country. For details of a learning centre near you, please consult Directorate Curriculum and Learning Development at Tel: +27 12 429 6889. A tutorial is an organized session where students and tutor(s) meet regularly at a common venue and at scheduled times to discuss course material. The main purpose of the tutorial services is:

- To facilitate student learning by developing the student’ independent learning skills
- Assisting students to become motivated and independent learners.
- Help the students to develop and enhance their learning experience and academic performance through interaction with the tutor and fellow students.

6 MODULE-SPECIFIC STUDY PLAN

“Study @ Unisa” contains valuable information regarding where to start your studies. Read the eleven steps that are recommended in this document.

It is recommended that you write down the due dates for the assignments that you have to do for the year and design a study plan around these dates. Below you will find an example.

PERIOD	ACTIVITY
January/February 2018	Familiarize yourself with the study material by scanning through the study guide and ensuring that you have all the relevant official documents. Introduce yourself to me and to your fellow students on myUnisa.
March/April 2018	Study the curriculum documents of the Department of Basic Education. Do and submit assignment 01 before or on 21 April 2018.
May/June 2018	Start working on assignment 02 by studying Tutorial Letter 501 (= your study guide) and the official documents. Make summaries of all the questions. Write and submit assignment 2 by 22 June 2018
July/August 2018	Work on assignment 3. Write submit assignment 03 by 18 August 2018.
September/October 2018	Prepare for and write the examination.

7 MODULE PRACTICAL WORK AND WORK-INTEGRATED LEARNING

There is no practical or work integrated learning for this module for this module.

8 ASSESSMENT

8.1 Assessment criteria

Before you complete an assignment you will need to do the necessary reading and make short notes. Your assignments must be well planned, neatly arranged and typed.

Provide your answer with a table of contents consisting of the main headings. Assign a number to each heading (and subsection thereof):

Example

1

2

3

3.1

3.2

3.3

4 et cetera

In the assignment each section should have a number and a heading and it should be in accordance with the table of contents. Pay attention to language, spelling, paragraphing and neatness.

When assessing this assignment the following are taken into account:

- your understanding of the question
- whether your answer is relevant to the question
- your ability to meaningfully transfer the content to your own instructional situation
- your ability to give relevant examples which are applicable to your instructional situation

8.2 Assessment plan

Assignments are seen as part of the learning material for this module. As you do the assignment, study the reading texts, consult other resources, discuss the work with fellow students or tutors or do research, you are actively engaged in learning. Looking at the assessment criteria given for each assignment will help you to understand more clearly what is required of you.

PLEASE NOTE: Enquiries about assignments (e.g. whether or not the University has received your assignment or the date on which an assignment was returned to you) must be directed to the UNISA contacts in the brochure *Study @ Unisa*.

8.3 General assignment numbers, unique numbers and due dates

Assignment	Due date	Unique number	Type
01	20 April 2018	872956	Multiple choice (Compulsory for examinations)
02	22 June 2018	685375	Written (compulsory)
03	17 August 2018	837567	Written Portfolio (compulsory)

PLEASE NOTE: You must comply with the submission dates.

Assignments received after the closing date, will be returned UNMARKED.

8.4 Submission of assignments

Assignments should be addressed to

Assignment Section

PO Box 392

UNISA

0003

You may submit written assignments and assignments done on mark-reading sheets either by post or electronically via myUnisa. Assignments may not be submitted by fax or email.

For detailed information and requirements as far as assignments are concerned, see the brochure Study @ Unisa, which you received with your study material.

To submit an assignment via **myUnisa**:

- Go to myUnisa.
- Log in with your student number and password.
- Select the module.
- Click on assignments in the menu on the left.
- Click on the assignment number you want to submit.
- Follow the instructions on the screen.

Make sure that your name, address, student number, subject code as well as the correct number of the assignment appear on the official cover for each assignment you submit. Please ensure that this information is absolutely correct. Negligence in this respect may cause considerable delay in the marking of your assignments. The number of the assignment which you fill in on the assignment cover must agree with the number of the assignment in this tutorial letter. Make sure that the pages of each assignment are numbered correctly and that they are pinned together in the correct order.

8.5 Assignments

ASSIGNMENT 01

COMPULSORY for examination admission

UNIQUE NUMBER – 872956

Closing date: 20 April 2018

FIVE possible answers are provided for each of the ten questions. Choose the correct option and indicate your answer on the mark-reading sheet provided. (Mark-reading sheet*)

- The method for answering the questions is explained on the mark-reading sheet. Please read the instructions carefully.
- Assignment number 01
- Use the correct code **LADMMM6**
- Unique number 872956
- Fill in this number in the space provided.
- Make sure that you fill in your student number in the correct space.

*If you have not received a mark-reading sheet, please contact the Dispatch Department immediately.

QUESTION 1

Mathematics is best described by the following statement:

1. Mathematics is based on memorisation of facts, rules, formulas and procedures.
2. Mathematics problems are meant to be solved as quickly as possible.
3. Mathematics requires a good memory.
4. Mathematics is a science of pattern and order.
5. Mathematics is all about symbols

QUESTION 2

A coin is tossed two times. The probability of getting two heads is:

1. $\frac{1}{4}$
2. 1
3. $\frac{2}{4}$
4. 2

QUESTION 3

Two girls buy refreshments at the sports field.

- Each drink costs d rands.
- Each snack costs s rands.
- Emi buys 3 drinks and 2 snacks for R12.
- Rho buys 2 drinks and 4 snacks for R16.

What is the cost of one drink?

1. R2
2. R3
3. R4
4. R5

QUESTION 4

Kat and Roy sketched lines on a Cartesian plane. Kat's line is represented by the equation:

$$y = 2x + 5$$

Roy's line is parallel to Kat's line. Which of the following could be an equation of Roy's line?

1. $2x + y = -5$
2. $-2x + y = -5$
3. $x + 2y = -5$
4. $-x + 2y = 5$

QUESTION 5

Which of the following is equivalent to the expression below?

$$4 + 36 \div 2 \cdot 5^2 - 3$$

1. $4 + 18 \cdot 25 - 3$
2. $4 + 36 \div 20 - 3$
3. $40 \div 2 \cdot 10 - 3$
4. $40 \div 2 \cdot 25 - 3$

QUESTION 6

A 6 side dice is rolled 100 times. It landed 21 times on 2. The relative frequency of it landing on 2 is:

1. $\frac{2}{21}$
2. $\frac{6}{21}$
3. $\frac{21}{100}$
4. $\frac{2}{100}$

QUESTION 7

A right circular cone has a volume of 39 cm^3 and a radius of $2\frac{1}{2} \text{ cm}$. Which of the following is closest to the height of the cone?

1. 0.7 cm
2. 0.8 cm
3. 6 cm
4. 7 cm

QUESTION 8

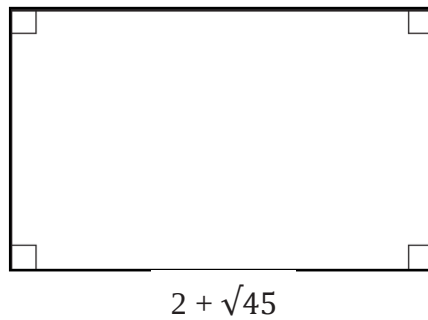
Which of the following is equivalent to the expression below?

$$(x + 3)(x + 4)$$

1. $x^2 + 7$
2. $x^2 + 12$
3. $x^2 + 3x + 12$
4. $x^2 + 7x + 12$

QUESTION 9

The length of a rectangle is represented by an expression shown in the diagram below



Which of the following is closest to the length of the rectangle in centimeters?

1. 8.3
2. 8.7
3. 9.1
4. 9.5

QUESTION 10

What is the slope of the line represented by the equation below?

$$4x + 5y = 10$$

1. $\frac{4}{5}$
2. $-\frac{4}{5}$
3. 4
4. -4

ASSIGNMENT 02 - COMPULSORY**UNIQUE NUMBER – 685375****Closing date: 22 June 2018**

For SECTION A of assignment 2 you have to work through units 1, 2 and 3 of the Tutorial letter 501.

There are several activities in your study guide. For this section of the assignment do activities that are indicated below. Ensure that your activities are numbered correctly.

SECTION A**QUESTION 1 (Unit 1 in your Tutorial Letter 501)**

Complete the following activity

1.1. The verbs of doing mathematics

Consider the following verbs of doing mathematics:

Explore	Predict	Justify	Investigate	Conjecture	Represent
Solve	Verify	Discover	Develop	Use	Construct
Explain	Formulate	Identify			

1.1.1. Choose any five verbs and complete the following table:

Verb of doing mathematics	Action required of the learner during the process of mathematising	Example of a mathematical activity that demonstrate the action
1)		
2)		
3)		
4)		
5)		
5 Marks	5 Marks	10 Marks

[20]

1.2. Gardening problem

Jamal had a garden in the shape of a square. Due to the construction of a new road, the garden will lose a 3 metres long strip on the south side. Jamal wants to know if he can make up for this difference by adding an extra 3 metres on the east side. Work out the area of the original garden. Cut out a template to represent the area of the garden. Use a scale of 1 cm = 1 m. Mark off the centimetres with a ruler. Cut off a 3 metre strip from the south side of your template.

- 1.2.1. Work out the area of the strip that has been lost. (1)
 - 1.2.2. Attach the strip to the east side. (1)
 - 1.2.3. What has Jamal not considered if he wants to keep his garden rectangular? (1)
 - 1.2.4. To ensure that the garden remains rectangular, what will the area of the strip on the east side need to be for this to be possible? (1)
 - 1.2.5. What is the area of the new garden? Does this area differ from the original area at all? If so in what way? (1)
- [5]**

1.3 Devising a three-part lesson format for an activity in the classroom

Select a mathematical activity from any source. You must give the reference for the activity that you have selected.

- 1.3.1. How would you teach the activity as a problem? Explain. (3)
 - 1.3.2. What specifically would you do during each of the 'before, during and after' section of the lesson? Describe each part clearly. (6)
 - 1.3.3. What would the learners do during each of the phases of the lesson? (6)
- [15]**

QUESTION 2 (Unit 2)

2.1. Cognitive schema: a network of connections between ideas

Select a particular skill (with operations, addition of fractions for example) that you would want your learners to acquire with understanding. Develop a cognitive

schema (mental picture or mind map) for the newly emerging concept (or rule). You should consider the following:

- Develop a network of connections between existing ideas (e.g. whole numbers, concept of a fraction, operations etc).
- Add the new idea (addition of fractions for example).
- Draw in the connecting lines between the existing ideas and the new ideas used and formed during the acquisition of the skill. (5)

2.2. Strategies for effective teaching

Consider the following strategies for effective teaching:

Create a mathematical environment

Pose worthwhile mathematical tasks

Use cooperative learning groups

Use models and calculators as thinking tools

Encourage discourse and writing

Require justification of learners' responses

Listen actively

2.2.1. In what way do these strategies support a developmental approach to teaching mathematics? (4)

2.2.2. From the seven strategies for effective teaching, pick three that you think are the most important. Motivate your responses in terms of how children learn. (6)

[15]

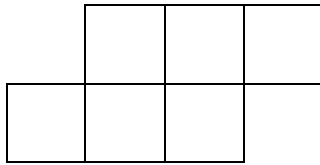
QUESTION 3 (Unit 3)

3.1. A problem solving approach to an activity

Consider the following problem that is designed to develop some ideas about area and perimeter for intermediate phase learners:

Problem

Assume that the edge of a square is 1 unit. Add squares to this shape so that it has perimeter of 14 units and 15 units.



3.1.1. Explain the pattern of your extended shape. (6)

3.1.2. Define the following terms:

- An edge (1)
- The perimeter (1)
- A square (1)
- The area (1)

3.2. Different levels of cognitive demands in tasks

Select a specific content area for an activity/task for the learners in one of your classes. Design an activity/task that promotes high-level thinking in terms of Stein et al's categories.

3.2.1. Identify the specific aims and skills in the activity you have designed. (5)

3.2.2. State the category into which you think your task falls. (2)

3.2.3. Explain why you think your task falls within this category. (3)

3.2.4. Write a paragraph describing to what extent and in what ways you think the task might promote mathematical reasoning. (5)

[25]

SECTION B

Lesson planning

Instructions:

Plan a lesson in any grade from 7 to 9. Indicate the grade for which the lesson is planned. Consistency is necessary in points 1 – 10 of 1.1. Ensure that there is cohesion between 1.1 and 1.2 of section B.

1.1. Background information for the lesson

In your lesson plan specify the following:

1. Content area (1)
2. Topic (1)
3. Specific aims applicable (2)
4. Specific skills appropriate (2)
5. Context that is applicable (2)
6. Teacher's activity (how to facilitate learning including teaching methods) (4)
7. Learners' activities (What will the learners do) (4)
8. Content range that is applicable- explain in terms of concepts and skills (3)
9. Teaching and learning support material necessary (3)
10. Assessment (types of assessment, methods of assessment and methods of collecting assessment evidence; also specify what will be assessed and how it will be assessed). (5)
11. Reflection - (What to consider when reviewing your lesson). (3)

[30]

1.2. Planning the teaching material

Choose one of the teaching and learning support materials below in order to illustrate the content that you would present to the learners:

1. Plan five **transparencies** for use on an overhead projector (use one A4 sheet per transparency) and indicate the content that you would present to the learners (4 marks per transparency – total of 20 marks).

OR

2. Plan five **flipchart sheets** (use one A4 sheet per flipchart sheet) and indicate the content that you would present to the learners (4 marks per flipchart sheet – total of 20 marks).

OR

3. Plan five **PowerPoint slides** (use one A4 sheet per PowerPoint slide) and indicate for each PowerPoint slide the content that you would present to the learners (4 marks per PowerPoint slide – total of 20 marks).

[20]

TOTAL = 130

ASSIGNMENT 03

COMPULSORY

PORTFOLIO

UNIQUE NUMBER- 837567

Due date: 17 August 2018

This assignment consists of section A and section B that forms a portfolio. For section A you have to work through the activities in Units 4 and 5. All activities in section A are **compulsory**.

Section B of the portfolio should be under the heading, **MY CHOICE**, and should constitute three exercises from unit 6 and three exercises from Unit 7.

SECTION A (Units 4 and 5) Compulsory activities

QUESTION 1 (Unit 4)

- 1.1. Activity 6

(10)
- 1.2. Activity 8

(10)
- [20]**

QUESTION 2 (Unit 5)

- 2.1. Activity 1

(10)
- 2.2. Activity 2

(10)
- [20]**

SECTION B (My Choice)

QUESTION 1 (Unit 6)

There are five exercises in Unit 6. **Choose three exercises** from the five and substantiate why you made that choice. Work the exercises out and put your answers in the portfolio. Numbering must be correct. Exercises must be numbered as in the study guide.

10 marks x 3 exercises = **[30]**

QUESTION 2 (Unit 7)

There are ten exercises in Unit 7. **Choose three exercises** from the ten and substantiate why you made that choice. Work the exercises out and put your answers in the portfolio. Numbering must be correct. Exercises must be numbered as in the study guide.

10 marks x 3 exercises = **[30]**

- Please start working on the portfolio at the beginning of the year. Do not leave the work to the last moment.
- Presentation of the portfolio:
 - ✓ Your worked activities must be placed in a file.
 - ✓ Put sub-dividers in the file to separate the compulsory work and activities of your choice.
 - ✓ Number the activities and exercises correctly as in the study guide.
 - ✓ Take pride in your presentation!
 - ✓ Ensure that all your personal particulars as well as the assignment number are indicated on the cover of your portfolio.
- Please note that the portfolio will not be returned to you. Make a copy for your own use.

TOTAL : 100 MARKS

9 OTHER ASSESSMENT METHODS

None

10 EXAMINATION

For general information and requirements as far as assignments are concerned, see the brochure *Study @ Unisa*, which you received with your study material.

10.1. Examination admission

No student will be admitted for examinations without submitting Assignment 01. All assignments contribute to your final examination mark.

10.2. Marks

10.2.1. Year mark

The year mark contributes **20%** of the final mark. It is built up from the marks obtained in each assignment.

Assignment 01 is **compulsory for examination admission**.

Assignment marks:

Assignment 01	6 marks	Compulsory for examination admission
Assignment 02	6 marks	
<u>Assignment 03</u>	<u>8 marks</u>	
Total	20 marks	

Although each assignment mark is converted to a percentage, this mark will be converted to a mark out of 6 or 8. By handing in assignments, you can work towards a substantial year mark. The exam mark, however, carries the most weight.

10.2.2. Examination mark

The exam mark contributes **80%** of the final mark.

The mark that is obtained in the final examination will be converted to a mark out of 80.

10.2.3. Final Mark

The final mark consists of the year mark (20%), plus the exam mark (80%). In order to pass this module, you must obtain a final mark of at least 50%. A sub-minimum of 40% must be obtained in the examination.

In summary:

	Assignments	Weight	Percentage	Due dates
Year mark	Assignment 1	6	20	20 April 2018
	Assignment 2	6		22 June 2018
	Assignment 3	8		17 August 2018
Examination mark	2 – hours		80	Timetable October/November 2018
Final mark			100	

10.3. Examination Period

This module is a year module in 2018. This means that you will write the examination in October/November 2018. The Examination Section will provide you with information regarding the examination in general, examination venues, examination dates and examination times.

10.4. Examination paper

An examination paper of two hours will be written at the end of the year. The examination paper will cover all the content in the module and will be out of 100 marks.

10.5. Previous examination papers

Previous examination papers are available to students. *You may be advised if papers are available at myUnisa.* We advise you, however, not to focus on old examination papers only as the content of modules, and therefore examination papers, changes from year to year.

10.6 Tutorial letter with information on the examination

To help you in your preparation for the examination, you will receive a tutorial letter that will explain the format of the examination paper and set out clearly what material you have to study for examination purposes. However, take note of the following:

EXAMINATION GUIDELINE REPORT

Demarcation or “scoping” for examinations and assessments

NB: In terms of a decision reached by the College, lecturers may not demarcate or “scope” specific work for examination purposes and examination questions should be based on all the work covering the notional hours of modules. Lecturers should encourage students to learn everything. In cases where competencies or skills are assessed differently during the tuition period, the various methods of assessment will be spelled out clearly by the lecturer in Tutorial Letter 201.

According to Assessment Procedure Manual 2013, paragraph 4.5.2(e), the examination memoranda (guidelines, rubrics, and so on) shall not be made available to students.

11 FREQUENTLY ASKED QUESTIONS

The *Study @ Unisa* brochure contains an A-Z guide of the most relevant study information.

12 CONCLUSION

Students, please note that you are most welcome to contact your lecturer if you experience any difficulties or have any queries about this module. We expect a critical engagement with this mathematics module. We encourage all those using this tutorial letter to alert concerned lecturers of any inconsistencies, or any other elements that may distract from the goal of establishing effective mathematics teaching system.

Remember to create an inviting atmosphere in your mathematics classrooms. Allow your learners to ask questions and to get critically and actively engaged in mathematical problem solving.

13 ADDENDA

Addendum A – Square paper

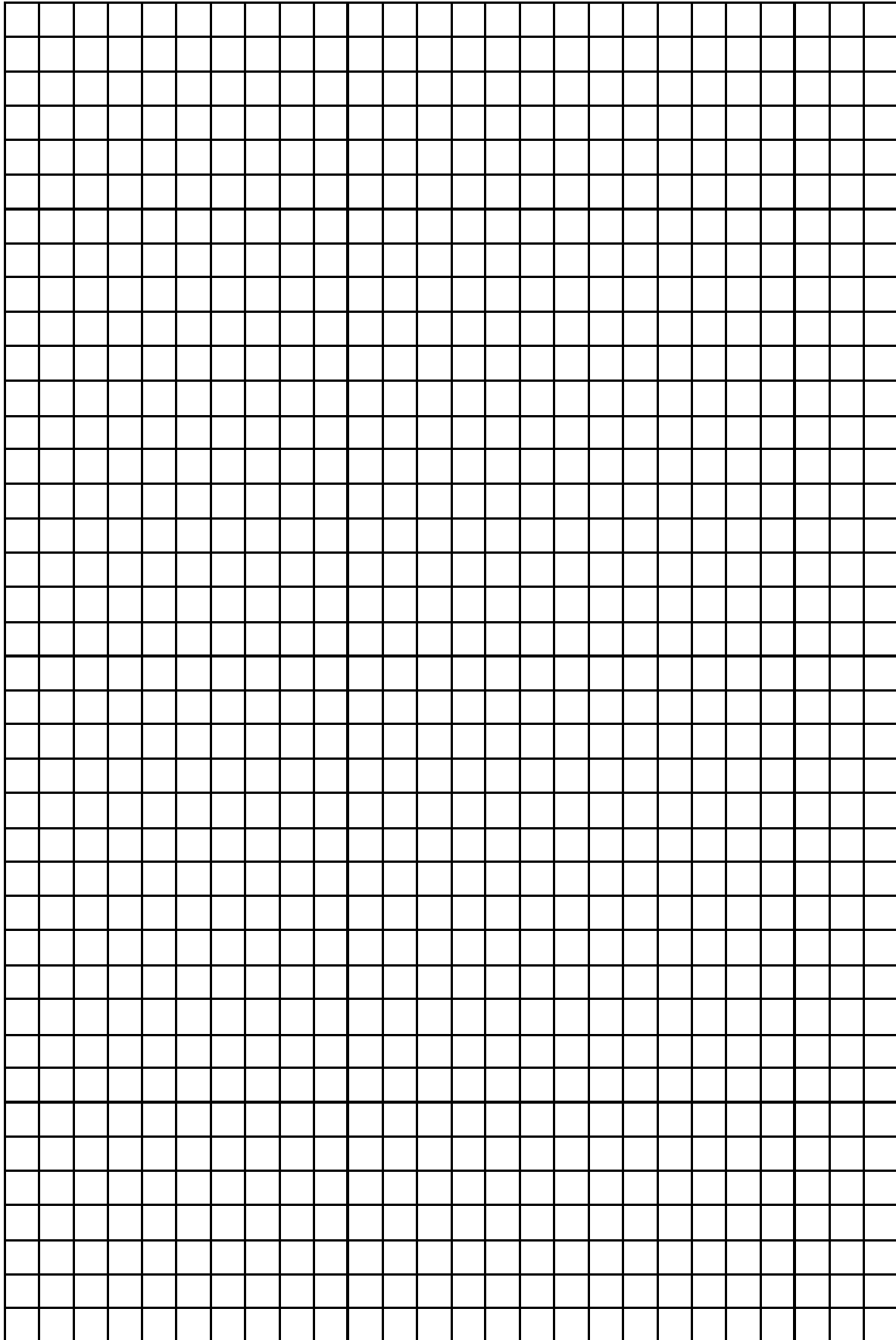
Addendum B – Square dot paper

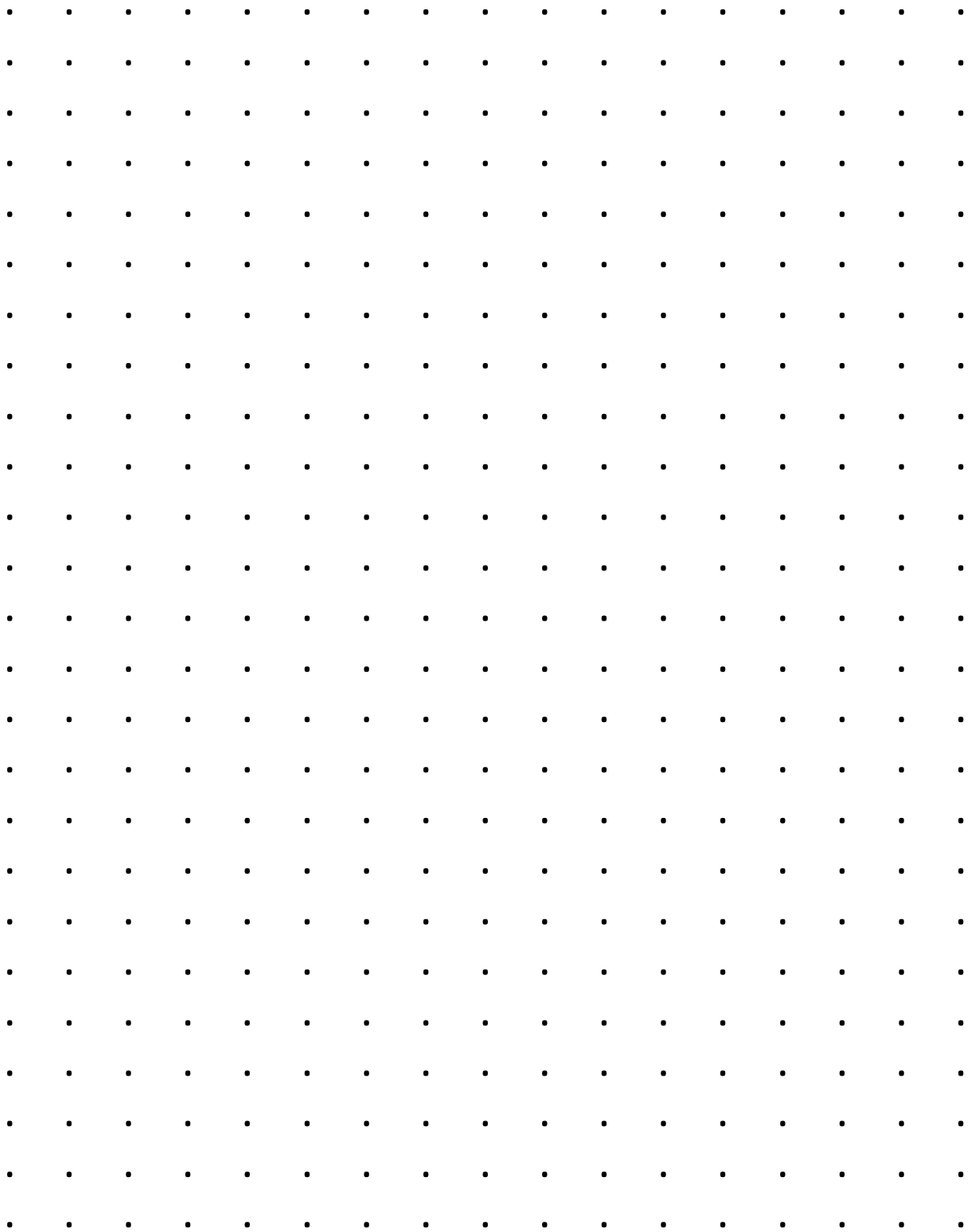
Addendum C – Isometric dot paper

Addendum D – Students feedback on Assignment 02

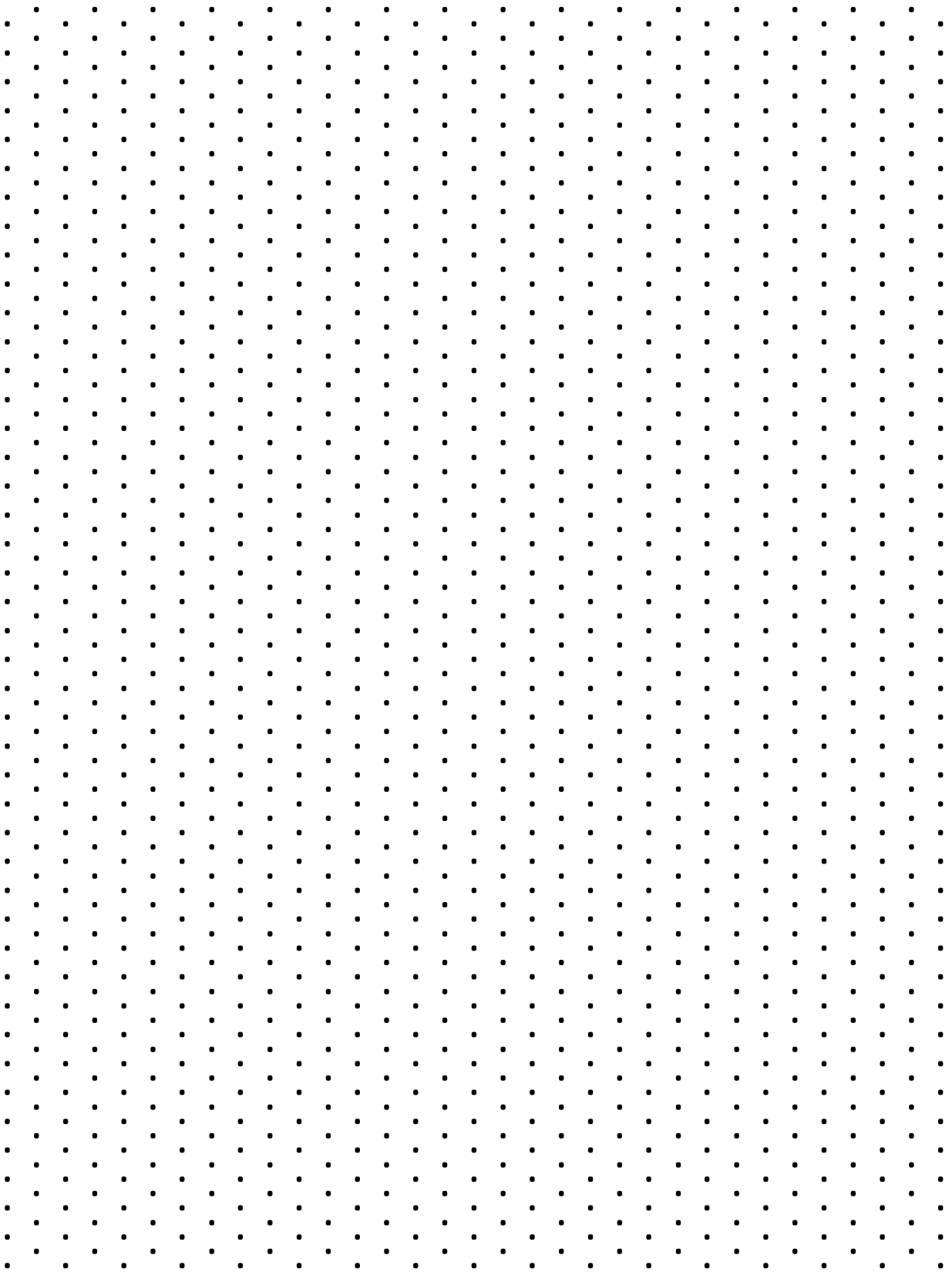
Addendum E – Students feedback on Assignment 03

ADDENDUM A: SQUARE PAPER



ADDENDUM B: SQUARE DOT PAPER

ADDENDUM C: ISOMETRIC DOT PAPER



ADDENDUM D:**FEEDBACK ON ASSIGNMENT 02 (INCLUDE WITH ASSIGNMENT 02)**

Name _____

Student number _____

Which activities in **units 1 – 3** did you enjoy the most? Explain.Which activities in **unit 1 – 3** did you find challenging? Explain.

What topic did you choose for your lesson plans? Why?

Was the insight you gained from designing your lesson plans useful for your teaching practice?
Explain.

Could you find suitable activities?



ADDENDUM E:

FEEDBACK ON ASSIGNMENT 03 (INCLUDE WITH ASSIGNMENT 03)

Name:

Student number:

Was enough information provided for compiling your portfolio?

What other information can you add?

Please reflect on what you have learned by compiling your portfolio.

Was enough information provided for compiling your portfolio?

