UNIVERSITY OF JOHANNESBURG
FACULTY OF EDUCATION
NOVEMBER / DECEMBER
SUPPLEMENTARY EXAMINATION 2014

PROGRAMME: BACHELOR OF EDUCATION FOUNDATION PHASE

MODULE: MATHEMATICS FOR TEACHING FOUNDATION PHASE

CODE: MFP20B2

TIME: 3 HOURS

MARKS: 100

EXAMINER: DR K LUNETA

MODERATOR: DR JP MAKONYE

(This paper consists of 5 pages)

INSTRUCTIONS

Read the following instructions carefully before answering the questions.

1. This question paper consists of 11 questions that must all be answered

2. Calculators are no allowed in this exanimation

QUESTION 1

i.	What is the difference between mass and weight?	(4)
ii.	What do you understand by the term conservation of mass?	(4)
iii.	Discuss the difference between volume and capacity.	(4)

[12]

QUESTION 2

Draw angles that are

i.	Compelementry	(2)
ii.	Supplementary	(2)
iii.	Congruent	(2)

[6]

QUESTION 3

Draw the following angles

i.	Acute angle	(2)
ii.	Reflex angle	(2)
iii.	An obtuse angle	(2)

[6]

QUESTION 4

Name the TWO units used to measure the each of following attributes in imperial and metric
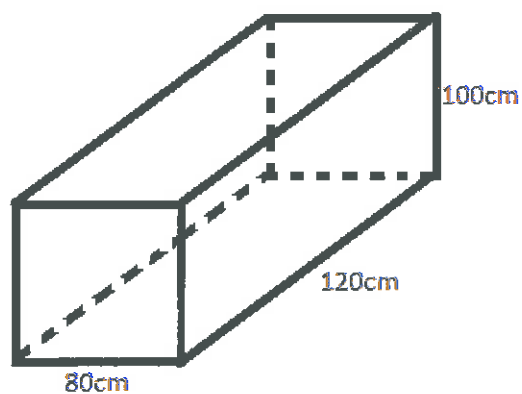
Units	Capacity	Length	Mass
Imperial			
Metric			

[12]

QUESTION 5

Complete the table below

4 km	………….cm	…………….mm
82500 mm	…………..m	…………….km
56700g	…………..kg	…………….tonnes
7200 minutes	…………..hr	…………….seconds
2.5l	…………..cm^3	…………….ml

[10]

QUESTION 6

What is the capacity of the polyhedrons below in litres?

100cm
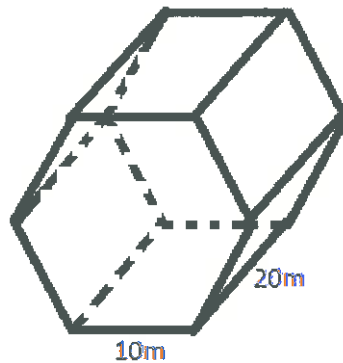120cm
80cm

(4)

10cm
20cm
16cm
16cm
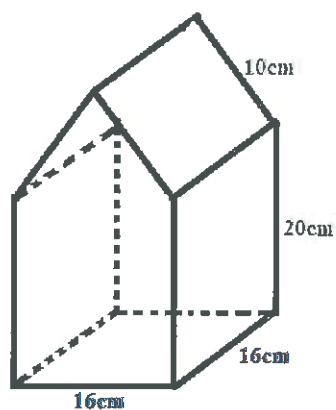
(4)   **[8]**

QUESTION 7

The mass of the above regular hexagonal precious metal pipe is 2 tonnes. If the value of 100g of the metal is R120.

i.   What is the total value of the metal pipe?   (6)
ii.   What is the volume of the of pipe in litres if the hexagonal face has an area of $120m^2$?
                                                                                      (4)
                                                                                    [10]

QUESTION 8

i.   A cyclist covers 240km in 1hr 30 minutes how many km will he cycle at the same speed in 720 minutes?   (4)
ii.   Find the speed of a car in m/sec that covers 240 km in 1⅓hrs.   (4)
                                                                                     [8]

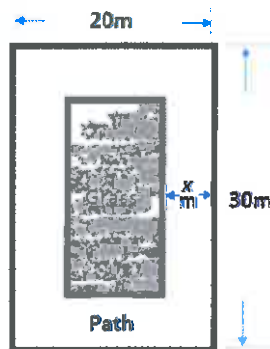## QUESTION 9

i.   If the time difference between Lagos and Johannesburg -4 hrs at what time and day will a plane that leaves Lagos at 22.25hrs on Monday night in Johannesburg if the flight is 6 hrs?   (4)

ii.   If a regular decagonal field is fenced with a 2160 cm wire mesh, what is the length of each side in metres?   (4)
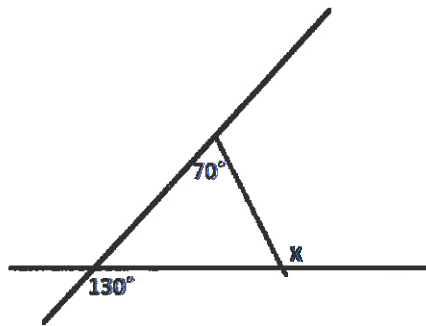   **[8]**

QUESTION 10

A path of a width x is laid around a rectangular lawn as shown.

a.   Find an expression for the perimeter of the grass.   (2)

b.   Find an expression for area of the grass.   (3)

[5]

QUESTION 11
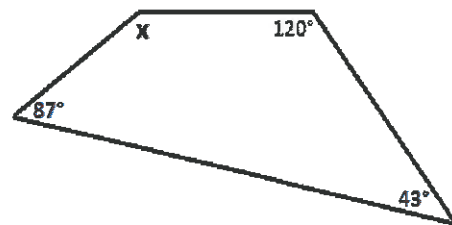
11.1 Find the values of X in i and ii below
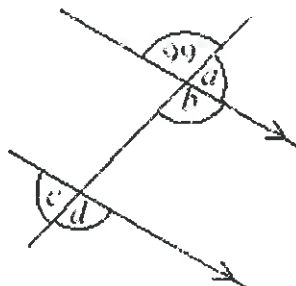

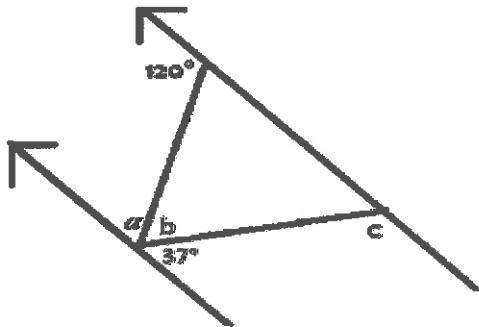i.   ii.   (4)

11.2 Find the values of angles marked: *a, b, c* and *d*

(4)

11.3 Find the size of the angles marked *a, b* and *c* in the diagram below:

(3)

11.4 What is the **sum of the interior angles** of a 30 sided regular shape? (4)

[15]

TOTAL: 100

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