UNIVERSITY OF JOHANNESBURG

UNIVERSITY OF JOHANNESBURG
FACULTY OF EDUCATION
NOVEMBER EXAMINATION 2016

PROGRAMME:	B Ed FOUNDATION PHASE
MODULE:	MATHEMATICS FOR THE FOUNDATION PHASE 3B
CODE:	MFP20B3 and MFP3B10
TIME:	2 HOURS
MARKS:	100
EXAMINERS:	Mr J Maseko
MODERATORS:	Dr. J. Makonye (University of the Witwatersrand)

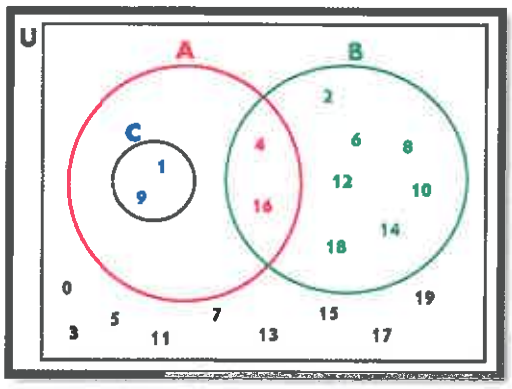
(This paper consists of 3 pages)

INSTRUCTIONS:

1. Read each question carefully before answering it.
2. Answer all four (4) questions.
3. Questions can bè answered in any sequence but ensure that you clearly number your answers.
4. NO CALCULATORS ALLOWED

QUESTION 1 /20

Find the set representation of:



1.1 U (3)

1.2 A (3)

1.3 B (3)

1.4 C (3)

1.5 Find the set representation of:

1.5.1 (CuBuA)' /4

1.5.2 A ∩ (BuC)' /4

QUESTION 2 **/30**

2.1 Complete each sequence - 2 more terms:

2.1.1 128, 64, 32, 16, (2)

2.1.2 8, 11, 17, 26, (2)

2.2 Calculate the first three terms using the rule

$T_n = 5^n + 1$ (3)

2.3 The first four terms of the sequence are: 32, 16, 0, -16, ...

2.3.1 Determine the rule for the *nth* term of the sequence (4)

2.3.2 Then, using the rule, calculate T_7 (3)

2.4 Calculate:

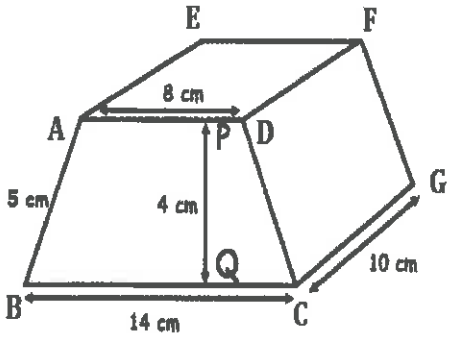
2.4.1 $40 \div (4 - (10-8))$ (4)

2.4.2 $1\frac{3}{4} \times 4\frac{3}{9} \div \frac{7}{36}$ (5)

2.4.3 $\frac{4\frac{1}{3} \div 26}{2\frac{2}{3} + \frac{2}{6}}$ (7)

QUESTION 3 **/30**

Using the information on the **3D** figure. **AB=CD=** 5cm; **AD** = 8 cm; **BC** = 14 cm; **CG** = 10 cm and height **PQ** = 4 cm. **Both** questions **3.1** and **3.2** relate to this figure. Find the



3.1 ***Total Surface Area*** of the figure all around (7)

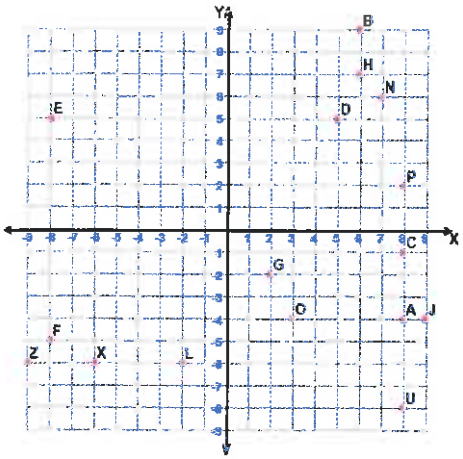
3.2 ***Volume*** of the figure (5)

3.3 Locate the following ordered pairs on the coordinate plane, and write the coordinates.

B **H**

L **U**

X (10)



3.5 Join points **E**, **D** with two others points to form a **square** involving two other quadrants. Write all four (4) coordinates. (6)

3.6 What is the size of ∠UAO? (2)

QUESTION 4 **/20**

2007, 2008, and 2015 petrol price on the given months in RSA cents – 95 Octane inland. All the calculations must be done about all the given period combined (NOT per year).

2007						
Jan	Feb	Mar	Apr	May	Jun	Jul
598	575	599	667	701	724	716
2008						
Jan	Feb	Mar	Apr	May	Jun	Jul
747	764	825	891	946	996	1070
2015						
Jan	Feb	Mar	Apr	May	Jun	Jul
1102	1009	1105	1261	1261	1308	1352

4.1 Represent all the petrol prices information in an ascending order (3)

4.2 Determine the mean and mode. (3)

4.3 Draw a line graph. Label axes and show graph title (6)

4.4 By how much is the lowest price away from the average? (2)

4.5 Determine the number of times when the petrol price is between 600 and 1000 cents. (1)

4.6 The price of petrol in July 2017 was 20% more than the July 2015 price. Determine the amount the owner will spend on filling the 50 litres car in July 2017. (5)

END OF EXAMINATION **----oOo----** **TOTAL: 100**