



**UNIVERSITY OF JOHANNESBURG
FACULTY OF EDUCATION**

JANUARY 2017 SUPPLEMENTARY EXAMINATION

PROGRAMME: FOUNDATION PHASE MATHEMATICS
MODULE: MATHEMATICS FOR THE FOUNDATION PHASE 1B
CODE: MFP20B1/MFP1B10
TIME: 2 HOURS
MARKS: 100
EXAMINERS: Mr J Maseko
MODERATORS: Prof. K. LUNETA

(This paper consists of 3 pages)

INSTRUCTIONS:

Read each question carefully before answering it. Answer all the questions.
Questions can be answered in any sequence but ensure that you clearly number your
answers. NO CALCULATORS ALLOWED

Question 1.**[29]**

Find answers to the following fraction problems. Give the answer in its simplest form.

1.1 $\frac{3}{5} + \frac{2}{3}$

(3) **1.2** $4\frac{2}{3} - 3\frac{3}{5}$ **(4)**

1.3 $\frac{6\frac{2}{5} \div 8}{4\frac{2}{3} + \frac{4}{5}}$

(6) **1.4** $5\frac{4}{5} \times 3\frac{3}{4} \div \frac{7}{12}$ **(5)**

1.5 $2\frac{1}{2} + 7 = \frac{4}{5} \times 1\frac{1}{4} \div 2$

(6) **1.6** $20\% \text{ of } 80 + 2\frac{1}{5}$ **(5)**

Question 2.**[20]****2.1** Convert the mixed numbers to decimals

2.1.1 $3\frac{5}{10}$

2.1.2 $4\frac{75}{100}$

2.1.3 $2\frac{4}{5}$ **[6]**

2.2 Convert the decimals to simplest compound fractions

2.2.1 3.4

2.2.2 5.48

2.2.3 4.05 **[6]**

2.3 Solve and leave your answer in decimal form**[8]**

2.3.1 $36.38 + 6.353 + 1.41071 =$ **(2)**

2.3.2 $7.0022 - 5.206710 =$ **(2)**

2.3.3 $34.2 \times 0.0003 =$ **(2)**

2.3.4 $2.40015 \div 0.003 =$ **(2)**

Question 3.**[24]**

Simplify (and evaluate where necessary). Give the answer in its simplest form positive exponents.

3.1 $14m^6 \cdot m^{-35} \cdot m^{44}$

(3)

3.2 $(3a^4b^7)^3$

(3)

3.3 $\left(\frac{x^4y^{-3}}{yx^{-\frac{5}{4}}}\right)^2$

(7)

3.4 $\frac{1000^{\frac{1}{3}}}{900^{-\frac{1}{2}}}$

(6)

3.5 $2^{\frac{1}{2}}2^{\frac{3}{2}} + 5\sqrt[4]{16}$

(5)**Question 4.****[27]**

Follow the instructions

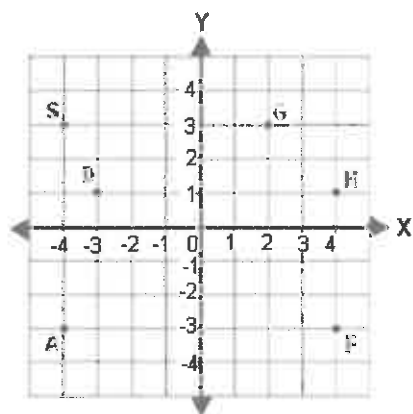
4.1 Make **a** the subject of this formula: $4k + 6ma = 12ma - 2k$

(3)

4.2 Find the value of $s = ut + \frac{1}{2}at^2$ if $u = -1$; $t = \frac{1}{2}$ and $a = 12$

(3)

4.3 If $5x - 20 = 5$, find the value of x

(3)

4.4 Give the coordinates of points A, D, S, G and F

(5)

4.5 What will be the coordinates of a point that will use points A, S, G to form a square?

(3)

4.6 Calculate the perimeter as well as the area of this square in 4.5.

(6)

4.7 Calculate the area of a $\triangle DGH$ formed by points D, G and H with height at G to base DH.

(4)**END OF EXAMINATION****TOTAL: 100**

