UNIVERSITY OF JOHANNESBURG
FACULTY OF EDUCATION
JUNE EXAMINATION 2017

PROGRAMME: B Ed
MODULE: MATHEMATICS FOR FOUNDATION PHASE 2A
CODE: MFP10A2
TIME: 2 HOURS
MARKS: 100.
EXAMINER: Mr G. Cheva and Prof. K. Luneta (Department of Childhood Education, UJ)
MODERATOR: Prof C. Long (Department of Childhood Education, UJ)
(This paper consists of 3 pages)

INSTRUCTIONS
Read the following instructions carefully before answering the questions.
1. This question paper has 6 questions, answer all of them
2. Calculators are not allowed

QUESTION 1

Answer the following questions

1.1 A circle is one of the shapes that children are taught at an early age.

1.1.1 Provide 3 examples from of objects real life that have a circle shape. (3)
1.1.2 Draw a circle and name all its parts (3)

1.2 Draw any rhombus and show 2 lines of symmetry (3)

1.1.3 Draw the pentagonal prism and show its plane symmetries (3)

1.4 Draw the net of a triangular pyramid (4)

1.5 Other than a rhombus, name and draw 5 different quadrilateral shapes (5)

[21]

QUESTION 2

2.1 There are more than 10 different types of polygons.

2.1.1 How would you teach a polygon to a grade 3 class? (2)

2.1.2 Name 8 different types of polygons other than a rhombus. (8)

2.1.3 What example could you use to explain a polyhedron in a Grade 3 or Grade 6 class? (2)

2.2 Name 8 different types of polyhedrons (10)

2.3 What are the similarities and differences between a kite and a rhombus? (5)

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QUESTION 3

3.1 Find the total surface area of a cylinder whose radius is 21 cm and the height is 20 cm and it is closed on both sides. (5)

3.2 Find the total surface area of regular octagonal prism. The dimensions are a height of 20 cm and a length of100 cm. It is open on both sides.
(8)

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QUESTION 4

4.1 The shape below shows a net of which polyhedron? (2)

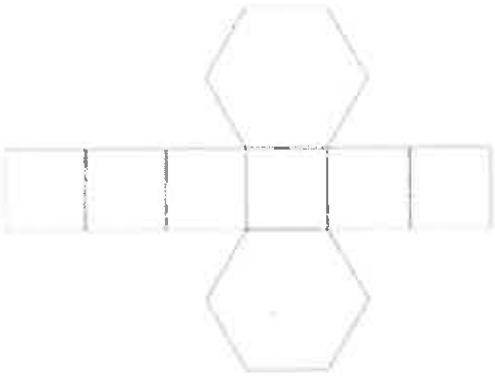
4.1.2 How many edges are there? (1)

4.1.3 How many faces have are there? (1)

4.1.4 How many vertices are there? (1)

4.1.5 The volume of an octagonal prism is 495 cubic milllietres. If the area of the base is 45 square metres, what is the height of the prism? (10)

[14]



QUESTION 5

5.1 Define what is meant by tesselation in mathematics? (2)

5.2 Draw a tesselation made up of a equilateral triangles (3)

5.3 Explain the terms rigid and non rigid transformations, provide an example of each? (5)

[10]

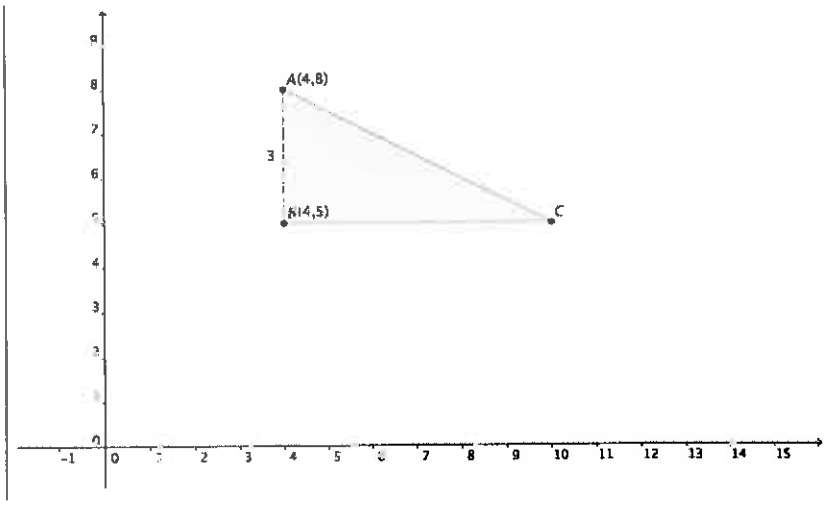
QUESTION 6

Given the figure below

6.1 Draw its image when translated 2 units to the right and 4 unit downwards. (5)

6.2 Draw its image when reflected about the y-axis. (5)

6.3 Draw its image when rotated clockwise about the origin through 90^0. (8)



[18]

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