

**UNIVERSITY OF SWAZILAND  
FACULTY OF EDUCATION  
MAIN EXAMINATION PAPER 2018**

**TITLE OF PAPER:** CURRICULUM STUDIES IN MATHEMATICS

**COURSE CODE:** CTE532/CTE332/EDC381

**PROGRAMME:** PGCE/B.Ed. 3

**TIME ALLOWED:** THREE (3) HOURS

**INSTRUCTIONS:** ANSWER ANY **FOUR** QUESTIONS. EACH QUESTION IS WORTH 25 MARKS.

**This paper contains 3 pages including this one**

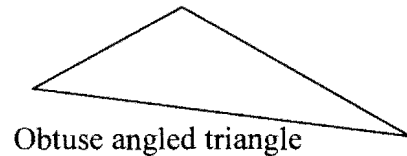
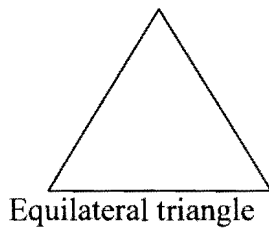
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TO DO SO BY THE INVIGILATOR**

### Question 1

Write an essay on the organisation of the mathematics department using the following subsections: leadership, teacher deployment, teaching learning resources, mathematics classes and assessment. [25]

### Question 2

Construct structured geometry items that would lead learners to discover the formula for area of a triangle. Make clear what your assumptions about learners' knowledge are in each item. The items should lead to different types of triangles such as:



[25]

### Question 3

Analyse each of the multiple choice items in appendix 1 on:

- The stem
- The diagram
- The item
- The responses

[25]

### Question 4

- What is a test specification grid? [5]
- Prepare a test specification grid for a Form 4 test on "directed numbers." The grid should include Bloom's taxonomy in the Cognitive domain. Additionally it should include everything you expect learners at this level to know about directed numbers. [15]
- Write an item at the application ability level in line with your test specification grid [5]

### Question 5

Discuss Loepp (1999)'s three models of curriculum integration in relation to mathematics and other school subjects. In your discussion of the three models, relate each to any of Forgarty (1991)'s ways of curriculum integration. [25]

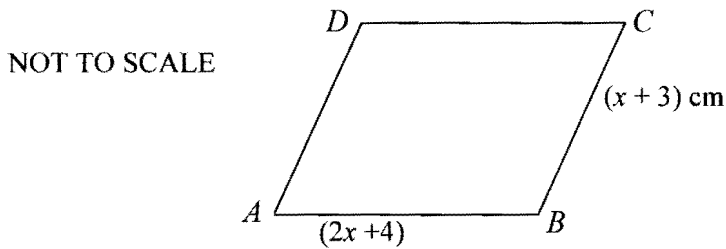
## Appendix 1

### Section B

For each question, four possible answers are given. Work out which one is correct and mark it on the answer grid provided

#### Question 7

The diagram shows a parallelogram  $ABCD$   $AB = (2x + 4)$  cm and  $BC = (x + 3)$  cm

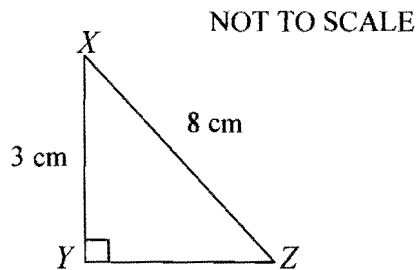


Given that the perimeter is 26 cm, the value of  $x$  is

- A 2                      B 3                      C 4                      D  $6\frac{1}{3}$

#### Question 8

The diagram below shows a right angled triangle  $XYZ$ .  $XY = 3$  cm,  $XZ = 8$  cm and  $\widehat{XYZ} = 90^\circ$

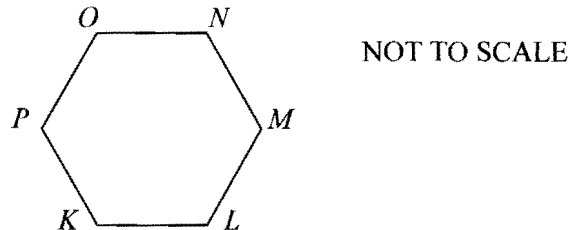


The length of  $YZ$  is

- A  $\sqrt{25}$                       B  $\sqrt{55}$                       C  $\sqrt{73}$                       D  $\sqrt{121}$

#### Question 9

The diagram below shows a polygon  $KLMNOP$  with all sides equal. What is the name given to the polygon?



- A irregular hexagon                      B irregular pentagon                      C regular hexagon  
D regular pentagon

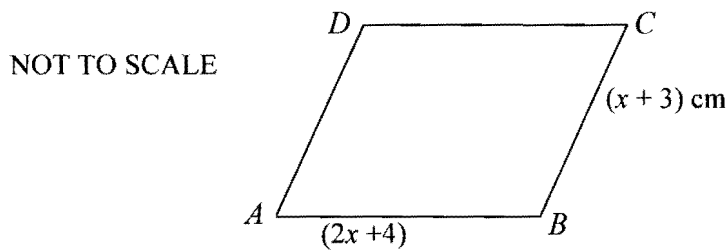
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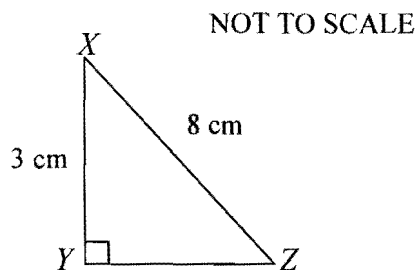


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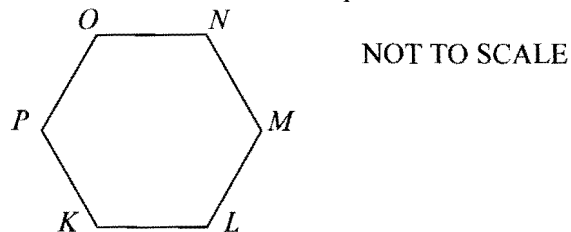


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