

# ENTEBBE MUNICIPAL COUNCIL SCHOOLS

## ACADEMIC BOARD

### PRIMARY LEAVING MOCK EXAMINATION - 2019

### MATHEMATICS PAPER

Time Allowed: 2 Hours 15 Minutes

Date: .....

Time: 9:00AM

|  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|
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Index No.

Candidate's Name: .....

Candidate's Signature: .....

School Name: .....

District Name: .....

Read the following instructions carefully:

1. The paper has **two** Sections: **A** and **B**.
2. Section **A** has 20 short-answer questions (40 Marks).
3. Section **B** has 12 questions (60 Marks).
4. Answer all questions. All answers in section **A** and **B** must be written in the space provided.
5. All answers must be written using a blue or black ball point pen or ink. Diagrams should be drawn in pencil.
6. Unnecessary changes of work may lead to loss of marks.
7. Any handwriting that cannot easily be read may lead to loss of marks.
8. Do **not** fill anything in the boxes. They are for examiner's use.

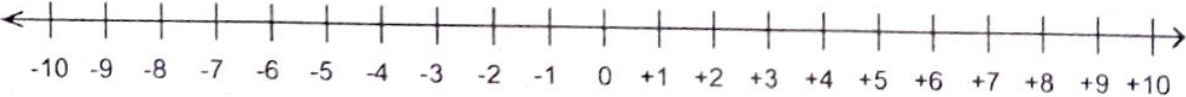
#### FOR EXAMINERS' USE ONLY

| FOR EXAMINERS' USE ONLY |       |                |
|-------------------------|-------|----------------|
| Qn. No.                 | Marks | Examiner's No. |
| 1 - 10                  |       |                |
| 11 - 20                 |       |                |
| 21 - 22                 |       |                |
| 23 - 24                 |       |                |
| 25 - 26                 |       |                |
| 27 - 28                 |       |                |
| 29 - 30                 |       |                |
| 31 - 32                 |       |                |
| TOTAL                   |       |                |

### SECTION A (20 questions, 40 Marks)

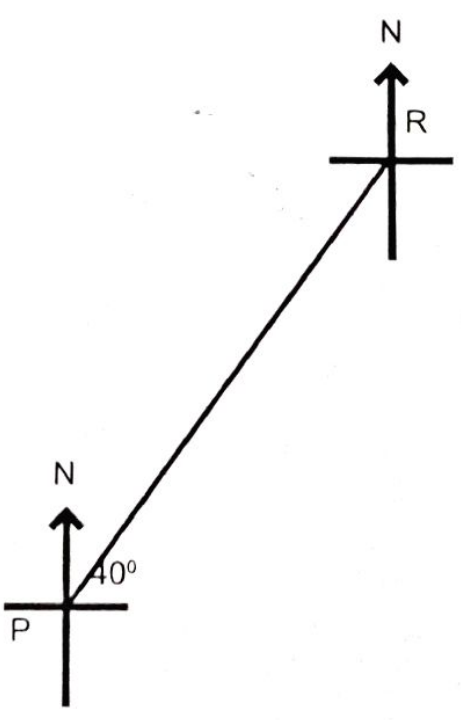
Each question in this section carries 2 marks

|    |                                                                                                                                        |    |                                                                                                                                                        |
|----|----------------------------------------------------------------------------------------------------------------------------------------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Work out: $24 + 52$                                                                                                                    | 2. | Simplify: $\frac{1}{2}(6y - 2x)$                                                                                                                       |
| 3. | <p>Draw beads to show the number 3042 on the abacus below:</p> <div><div>Th</div><div>H</div><div>T</div><div>O</div><div></div></div> | 4. | <p>Given that <math>A = \{\text{multiples of 4 less than 15}\}</math><br/>Find the number of subsets in set A</p>                                      |
| 5. | <p>Express 0.01962 in standard form.</p> <div></div>                                                                                   | 6. | <p>Using a pair of compasses, a ruler and a pencil only, construct a perpendicular bisector of the line below:</p> <div><div>P</div><div>Q</div></div> |

|                                                                                                                                                          |                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <p>7. Find the next number in the series below 19, 17, 13, 11, _____</p>                                                                                 | <p>8. Sr. Jane Francis had 60km still to cover after travelling <math>\frac{3}{4}</math> of the journey. How long was the journey?</p> |
| <p>9. The average age of 3 teachers is 40 years. If one of the teachers is 50 years old. Find the average age of the other two teachers.</p>             | <p>10. Work out: <math>(6.5 \times 13) + (6.5 \times 17)</math></p>                                                                    |
| <p>11. Work out <math>-6 - -4</math> using a number line below:</p>  |                                                                                                                                        |

|     |                                                                                                                                                                                                                           |     |                                                                                                                                                                                                                                                                                                                                                                      |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12. | <p>The factors of 20 and 24 are given below: <math>20 = 2 \times 2 \times 5</math></p> <p><math>24 = 2 \times 2 \times 2 \times 3</math></p> <p>Use the factors above to find the lowest common multiple of 20 and 24</p> | 13. | <p>Solve <math>3^{3p} + 3^p \equiv 3^6</math></p>                                                                                                                                                                                                                                                                                                                    |
| 14. | <p>A minute hand of a clock makes <math>2\frac{1}{4}</math> revolutions to cover the time of the science mock examination. If the examination starts at 11:45 a.m. At what time will it end?</p>                          | 15. | <p>In the triangle below <math>AB = 6\text{cm}</math>, <math>CE = 4\text{cm}</math> and <math>BC = 8\text{cm}</math>. Study it carefully and answer the question that follows.</p> <div data-bbox="861 1120 1372 1612" data-label="Diagram"> </div> <p>Find the length of AD</p> <div data-bbox="1380 1937 1492 2016" data-label="Form"> <input type="text"/> </div> |



|     |                                                                                                                                                                                                                                                |     |                                                                                                                                                                                                                    |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16. | Express 7 ten to binary.                                                                                                                                                                                                                       | 17. | The town clerk borrowed sh. 200,000 from the bank to be returned after 4 months at a simple interest rate of 10% per month. Find out the total amount of money the town clerk returned to the bank after 4 months. |
| 18. | The mass of a packet of Omo is $\frac{1}{2}$ kg. What is this mass in grams?                                                                                                                                                                   | 19. | <p>In the figure below, find the bearing of town P from town R</p>                                                              |
| 20. | <p>The perimeter of an equilateral triangle is 36cm. If one side is <math>(K+8)</math> cm. find the value of K.</p> <div data-bbox="1388 1926 1500 2016" style="border: 1px solid black; width: 70px; height: 40px; margin-left: auto;"></div> |     |                                                                                                                                                                                                                    |

### SECTION B (12 Questions, 60 Marks)

Marks for each question are indicated in the brackets.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <p>21. a) Write CXCIX in Hindu- Arabic numerals.</p> <p>(2 Marks)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>b) Round off 2019 to the nearest tens.</p> <p>(1 Mark)</p>                                                              |
| <p>22. At the Teachers' day celebrations held in Mayor's Gardens in Entebbe, there were 49 guests, 20 guests addressed the people who attended the celebrations in English (E), 25 guests addressed the people in Kiswahili (K), Y guests addressed in both languages while 3y guests addressed in neither of the two languages.</p> <p>a) Use the information given above to complete the venn diagram. <span style="float: right;">(3marks)</span></p> <div style="text-align: center; margin: 20px 0;"> <math>n(\epsilon) = 49</math> </div> <div style="border: 1px solid black; padding: 10px; margin: 0 auto; width: 60%;"> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <span><math>n(E) = 20</math></span> <span><math>n(K) = 25</math></span> </div> </div> |                                                                                                                            |
| <p>b) Find the value of y <span style="float: right;">(2marks)</span></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>c) How many guests addressed the people in neither English nor Kiswahili <span style="float: right;">(1mark)</span></p> |

23. The table below shows the number of goals scored by the she Cranes in a series of netball matches.

|                   |   |   |   |   |   |
|-------------------|---|---|---|---|---|
| Number of goals   | 1 | 2 | 3 | 4 | 5 |
| Number of matches | 3 | 4 | 1 | Y | 2 |

If the mean number of goals is 3, find the value of y (2marks)

a)

b) What is the modal number of goals? (2marks)

c) What is the probability that a team scored goals below the mean number of goals? (2marks)

24. A farmer earns  $\frac{2}{3}$  of his daily income by selling water melons,  $\frac{1}{5}$  by selling goats and the rest by selling timber.

a) If the farmer earns shs. 3,000,000 from timber, what is his daily income? (3marks)

b) Arrange the decimals numbers below beginning with the largest and ending with the smallest.  
0.25, 0.5, 2.0, 0.008 (2marks)

25. a) The figure below shows an irregular polygon. Calculate the size of angle x. (2marks)

b) What is the size of one of the centre angles of a regular octagon (2marks)

26. The time table below is for the flight of Bombardier Uganda airlines.

| Town/Airport | Arrival time | Departure time |
|--------------|--------------|----------------|
| Entebbe      |              | 0600 Hours     |
| Cairo        | 0940 Hours   | 1015 Hours     |
| Accra        | 1100 Hours   | 1130 Hours     |
| London       | 1345 Hours   | 1400 Hours     |
| Kigali       | 1600 Hours   |                |

a) Express the arrival time of the Bombardier plane in London in a 12 hours clock system (2marks)

b) How long did the plane take to reach Accra from Entebbe. (2mark)

c) For how long did the plane rest in Cairo? (2 marks)



|    |                                                                                                                                    |
|----|------------------------------------------------------------------------------------------------------------------------------------|
| d) | If a plane covered a distance of 1200km from Entebbe to Kigali, what was the plane's average speed for the whole journey? (2marks) |
|----|------------------------------------------------------------------------------------------------------------------------------------|

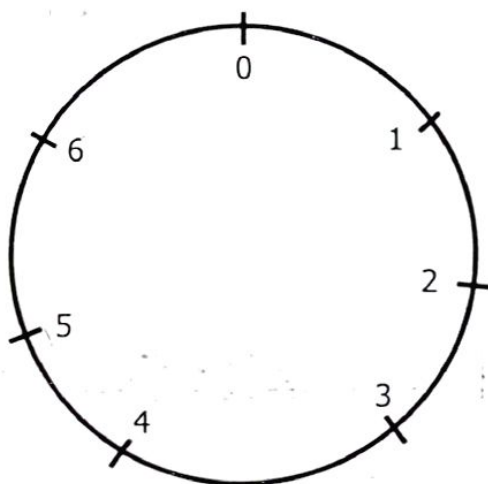
|     |                                                                                                                           |
|-----|---------------------------------------------------------------------------------------------------------------------------|
| 27. | <p>The solid figure below is a water tank in a shape of triangular prism</p> <p>a) Find the value of p in cm (3marks)</p> |
|-----|---------------------------------------------------------------------------------------------------------------------------|

|    |                                                              |
|----|--------------------------------------------------------------|
| b) | Calculate the capacity of the above tank in litres. (2marks) |
|----|--------------------------------------------------------------|

|     |                                                                 |
|-----|-----------------------------------------------------------------|
| 28. | a) Given that $x=2y-1$ , find the value of y if $x =5$ (2marks) |
|-----|-----------------------------------------------------------------|

b) A teacher is 48 years old and his son is 17 years old. At what age will the teacher be twice as old as his son? (2marks)

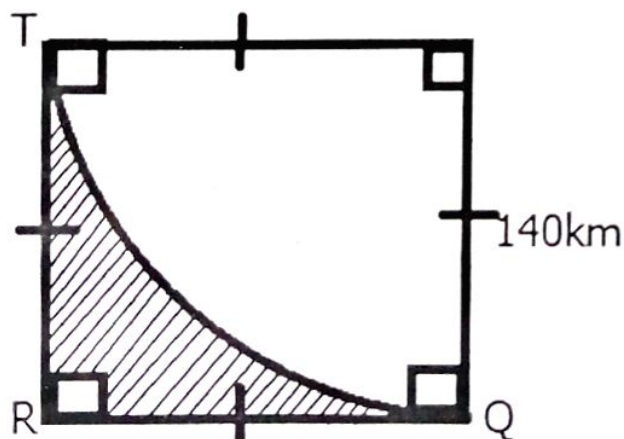
29. a) use a dial below to work out  $4-5=$  \_\_\_\_\_ (finite 7) (2 marks)



b) Today is Thursday 8<sup>th</sup> August, what day of the week will 9<sup>th</sup> October the same year be? (2marks)

|     |                                                                                                                                                                |    |                                                                                                                                                                                                                                                                          |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 30. | A forex Bureau buys one dollar at Ug sh. 3500 and sells one pound sterling at Ug shs. 4,000. Mr. Ndiagga wants to exchange US dollars 3,000 to pound sterling. |    |                                                                                                                                                                                                                                                                          |
| b)  | How many pound sterling will he get?<br>(2marks)                                                                                                               | b) | <p>A school bursar withdrew money from Stanbic bank Entebbe. He was given new bank notes numbered consecutively from.</p> <p><math>\frac{K}{N}</math> 617501 to <math>\frac{K}{N}</math> 617600</p> <p>How many bank notes were given to the school bursar? (2marks)</p> |

31. The diagram below shows road TR intersecting road RQ at an angle of  $90^\circ$  at point R. The two roads are also connected to T and Q by arc-shaped road measuring a quarter a circle of 140km in radius. Study it carefully and answer the questions.



a) Find the distance saved by Ms. Lipa who drives through the arc-shaped road instead of driving straight TR and RQ. (Take  $\pi = \frac{22}{7}$ ) (3marks)

b) Find the area of the shaded part. (3marks)

32. The table below shows four countries that participated in Africa cup of nations (AFCON) and the points scored. Study it carefully and answer the questions that follow:

| Country    | Points scored |
|------------|---------------|
| Egypt      | 9             |
| Uganda     | 4             |
| D.R. Congo | 3             |
| Zimbabwe   | 2             |

Draw an accurate circle graph to represent the above information in the table. (Use radius of 5cm) (5marks)

END