PRIMARY LEAVING EXAMINATION

2018

MATHEMATICS

Time Allowed: 2 hours 30 minutes

	EMIS No.						Personal No.		
Index No.									

Candidate's Name .....

Candidate's Signature .....

EMIS No. .....

District Name .....

Read the following instructions carefully:

1. This paper has **two** sections: **A** and **B**. Section **A** has **20** questions and Section **B** has 12 questions. The paper has **15 printed pages** altogether.
2. Answer **all** questions. **All** the working for both sections **A** and **B** must be shown in the spaces provided.
3. **All** working must be done using a **blue** or **black** ball point pen or ink. Any work done in pencil other than graphs and diagrams will **not** be marked.
4. **No calculators** are allowed in the examination room.
5. Unnecessary **changes** in your work may lead to **loss** of marks.
6. Any handwriting that **cannot** easily be read may lead to **loss** of marks.
7. Do **not** fill anything in the table indicated: **"For Examiners' Use Only"** and boxes inside the question paper.

FOR EXAMINERS' USE ONLY		
Qn. No.	**MARKS**	**EXR'S NO.**
1 - 5		
6 - 10		
11 - 15		
16 - 20		
21 - 22		
23 - 24		
25 - 26		
27 - 28		
29 - 30		
31 - 32		
TOTAL		

Turn Over

SECTION A: 40 MARKS

*Answer **all** questions in this Section*

*Questions **1** to **20** carry two marks each*

1. Work out: $36 \div 3$

2. Write in figures: Nine thousand, thirty six.

3. Given that $P = \{a, b, c, d, e, f, g\}$ and $Q = \{b, a, f, e, h\}$, find $n(P \cup Q)$.

4. A teacher counted pupils without school uniform in a class and tallied them as follows: 𝍸 𝍸 𝍸 𝍸 IIII.
How many pupils were without school uniform?

5. The clock face below shows time in the afternoon.

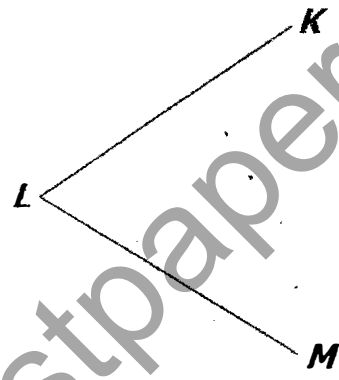
Write the time shown in 24-hour clock.

6. Simplify: $5k - 2(3 - k)$

7. A car uses 7 litres of petrol to cover 28 kilometres. How many litres of petrol can it use to cover 64 kilometres?

8. Okia bought 4 packets of washing powder each weighing 750 grams. Find the weight of the washing powder Okia bought in kilograms.

9. Use a protractor to measure the size of angle ***KLM*** below.



Angle ***KLM*** = ...

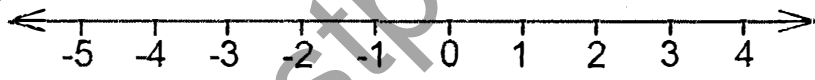
10. Find the next number in the sequence:

1, 2, 10, 37, ...

11. Work out: (49 x 39) + (61 x 49)

12. Round off 796 to the nearest tens.

13. Work out: $^{-}5 + {}^{+}2$ on the number line below.



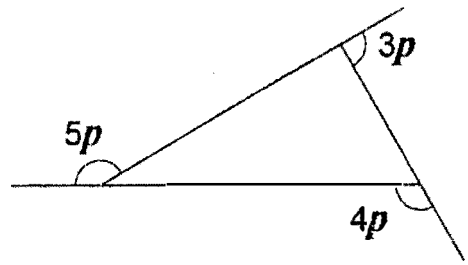
14. Martha drove from town *A* to town *B* at a speed of 72 km per hour. Town *A* is 90 km away from town *B*. Calculate the time she took to reach town *B*.

Turn Over

15. The following heights of six children were recorded at a health centre: 53 cm, 64 cm, 59 cm, 51 cm, 63 cm and 61 cm. Find the median height of the children.

16. Given that 1 US dollar ($) costs Uganda shillings (Ug.sh) 3,672 and 1 Kenya shilling (Ksh) costs Ug.sh 36, find the cost of 1 US dollar in Kenya shillings.

17. Find the value of p in degrees in the diagram below.



18. The taxi fare from Kampala to Mukono was raised by $16\frac{2}{3}\%$. The old fare was sh 3,000. Find the new taxi fare.

19. Solve the inequality: $3 - 2m < 15$.

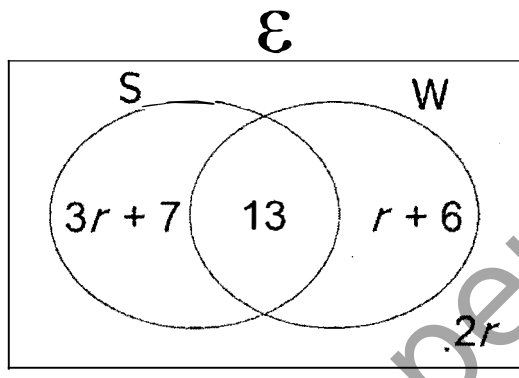
20. Bottles of 300 millilitres (ml) were used to fill a nine litre bucket with water. Find the number of full 300 ml bottles that were used.

SECTION B: 60 MARKS

*Answer **all** the questions in this Section*

Marks for each question are indicated in brackets

21. At a party, guests were served with soda (S) and mineral water (W) as shown in the Venn diagram below. Study and use the Venn diagram to answer the questions that follow.



(a) If 32 guests were served with soda, find;

(i) the value of r. *(02 Marks)*

(ii) the total number of guests who attended the party. *(02 Marks)*

(b) Find the probability that a guest picked at random did not take any drink. *(01 Mark)*

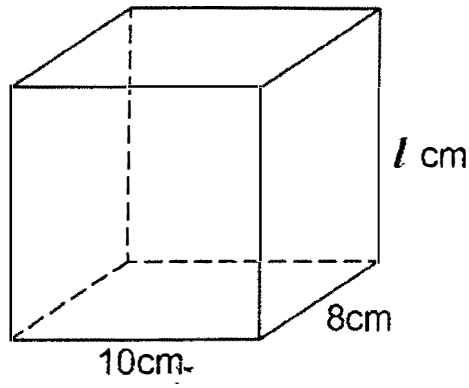
22. (a) Express $\frac{4}{15}$ as a recurring decimal. *(02 Marks)*

(b) Simplify: $\frac{4}{5} \times \frac{3}{7} \div \frac{9}{14} + 2\frac{7}{15}$ *(03 Marks)*

23. (a) Write the place value of 2 and 1 in 201_{three} *(02 Marks)*

(b) Work out: $42_{five} \times 21_{five}$ *(02 Marks)*

24. The sum of the lengths of all the edges of the prism below is 96 cm.



(a) Find the length of edge l. *(03 Marks)*

(b) Calculate the volume of the prism. *(02 Marks)*

25. Study and complete Mukasa's shopping table below: *(05 Marks)*

Item	Quantity	Unit Cost	Amount
Sugar	3 kg	sh..... per kg	sh 14,400
Rice	..... kg	sh 5,000 per kg	sh 2,500
Milk	250 ml	sh 3,000 per litre	sh .....
Biscuits	2 packets	sh ..... per packet	sh .....
Total Expenditure			**sh 29,650**

26. (a) Using a pair of compasses and a ruler only, construct a rhombus *UVXY* whose diagonals are 14 cm and 10 cm. *(04 Marks)*

(b) Measure the length VX. .....cm *(01 Mark)*

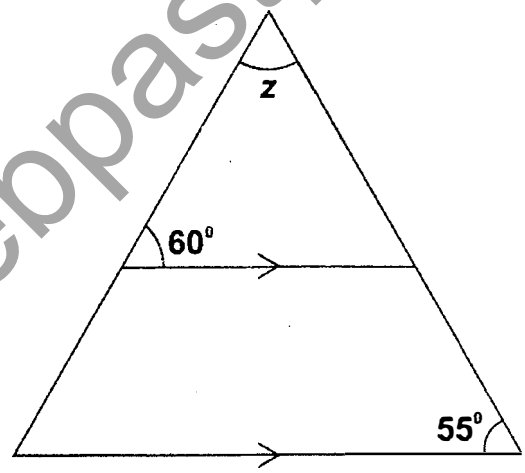
Turn Over

27. The average weight of four boys is 56 kg. When two other boys join the group, the average weight becomes 52 kg. The sixth boy is 8 kg heavier than the fifth boy. Find the weight of the sixth boy.

(06 Marks)

28. (a) The interior angle of a regular polygon is $108°$ more than the exterior angle. How many sides has the polygon? *(03 Marks)*

(b) In the figure below, find the size of angle ***z***. *(02 Marks)*



29. Joyce, Peter and Hannah shared pencils in the ratio 3:5:7 respectively.

(a) If Hannah got 12 more pencils than Joyce, how many pencils did they share altogether? *(04 Marks)*

(b) Find the number of pencils Peter got. *(02 Marks)*

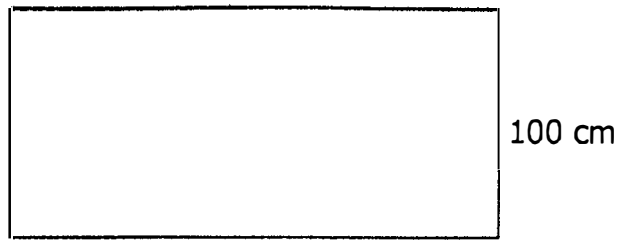
30. Kizito is 38 years old and his sister is 24 years old.

(a) How many years ago was Kizito three times as old as his sister? *(03 Marks)*

(b) How old was Kizito's sister then? *(01 Mark)*

Turn Over

31. The figure below shows a rectangular sheet of metal. The sheet is curved to form the wall of a cylindrical tank whose height is 100 cm.



(a) Find the diameter of the tank formed. (Use $\pi = \frac{22}{7}$) *(02 Marks)*

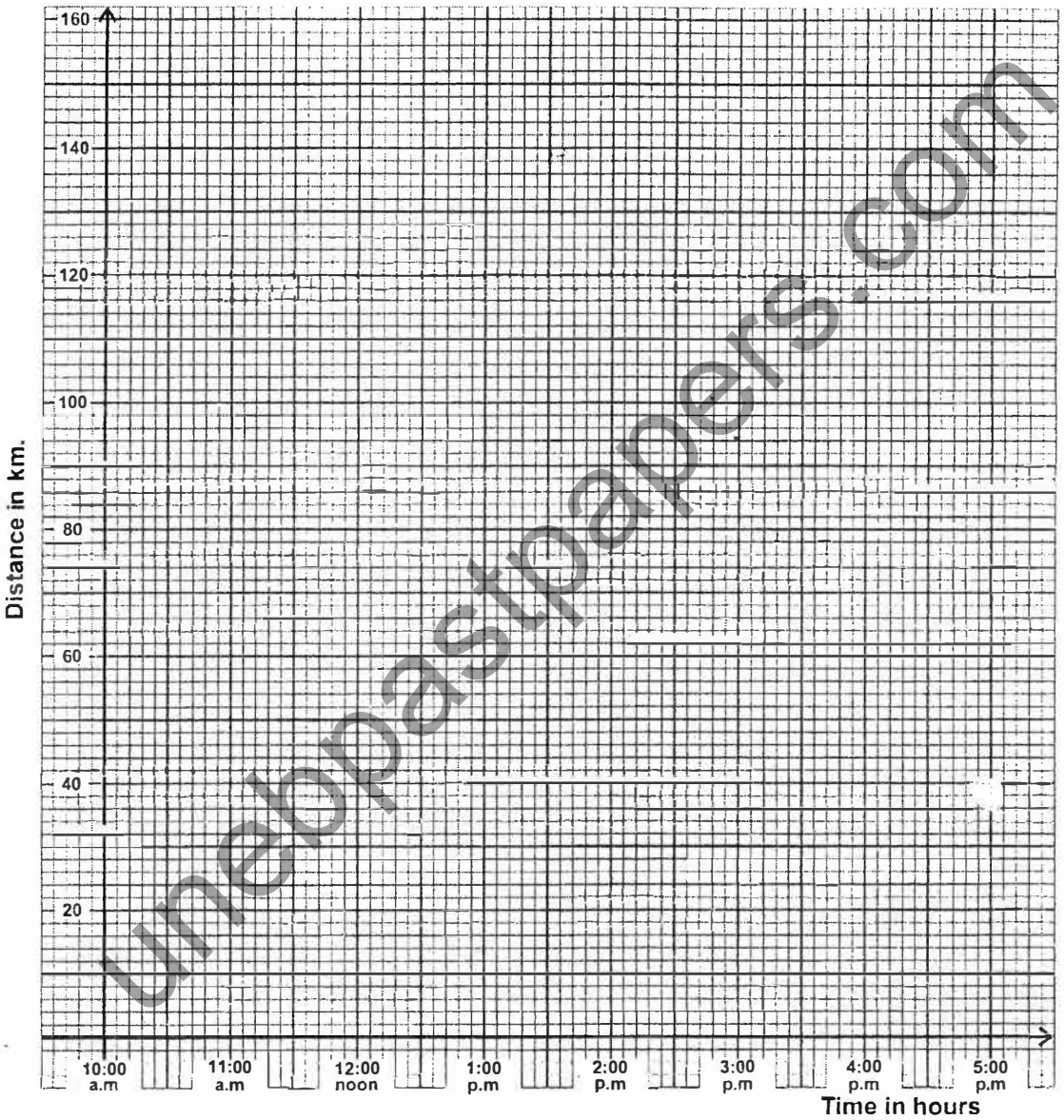
(b) Calculate the;

(i) area of the sheet needed to cover the base of the tank. *(02 Marks)*

(ii) capacity of the tank. *(02 Marks)*

32. Town *M* is 150 km from town *G*. A motorcyclist started a journey from town *M* at 10:30 a.m. He was travelling at a speed of 25 km/h for 2 hours. He rested for 30 minutes and then continued at a speed of 50 km/h for the rest of the journey to town *G*.

(a) Represent the motorcyclist's journey on the graph below. *(03 Marks)*



(b) At what time did the motorcyclist reach town *G*? *(01 Mark)*

III

END