SURE KEY EXAMINATIONS BOARD

PRIMARY LEAVING EXAMINATION

2020

MATHEMATICS

Time Allowed: 2 hours 30 minutes

Index No.	Random No.						Personal No.		

Candidate's Name: ....

Candidate's Signature: ....

School Random No. ....

District ID: ....

Read the following instructions carefully:

1. Do not write your **school** or **district name** anywhere on this paper.

2. This paper has two sections: **A** and **B**. Section **A** has **20** questions and Section **B** has **12** questions. The paper has **16 printed pages** altogether

3. Answer **all** questions. **All** the working for both sections **A** and **B** must be shown in the spaces provided.

4. **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.

5. **No calculators** are allowed in the examination room.

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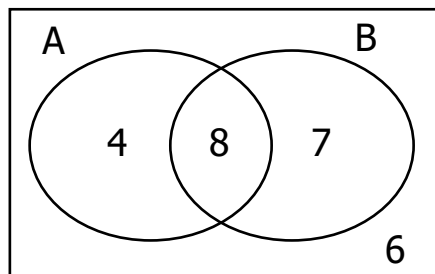
FOR EXAMINERS' USE ONLY		
Qn.No.	MARKS	EXR'S NO.
1 - 5		
6 - 10		
11 - 15		
16 - 20		
21 - 22		
23 - 24		
25 - 26		
27 - 28		
29 - 30		
31 - 32		
TOTAL		

SECTION A: 40 MARKS

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

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

1. Work out: 123 + 43

2. Write 'Thirty thousand three' in figure.

3. Simplify ⁻8 − ⁻3 without using a numberline.

4. The diagram below shows the elements of set A and set B.

Find n(B)'

5. The graph below shows the journey made by Opio and Kato between towns K and L which are 200km apart. Opio left town K at 7:00a.m driving at a steady speed of 50km/hr to town L. Kato left town L at the same time and covered a distance of 60km at a steady speed in an hour. He then rested for half an hour after which he drove for 2½ hours to town K.
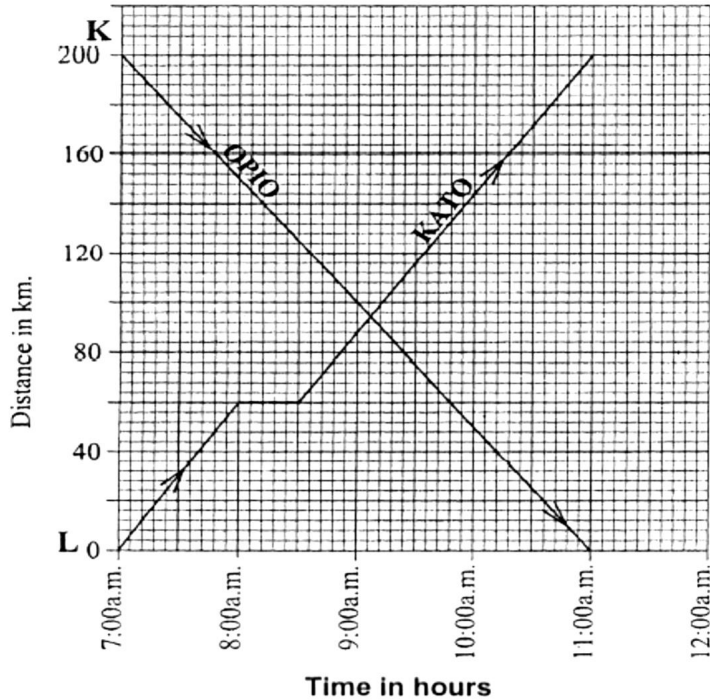
    Work out Kato's average speed for the journey he covered after resting.

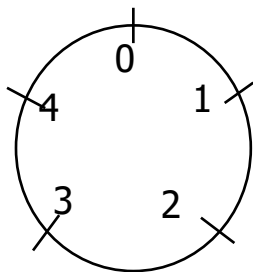6. Simplify: $9 - 2(m+3)$

Turn Over

7. What is the place value of 3 in the number 832,097?

8. The interior angle sum of a regular polygon is 900^0. Name the polygon.

9. Use the diagram below to work out 3 + 4 (mod 5)

10. Find the next two fractions in the sequence below.

$$\frac{2}{3} \ , \ \frac{4}{6} \ , \ \frac{12}{18} \ , \ \underline{\hspace{1cm}} \ , \ \underline{\hspace{1cm}} \ .$$

11. Three pupils are required to lift a 18kg saucepan full of posho. How many pupils of the same strength would the school cook need to lift a 12kg saucepan full of beans sauce?

12. Kamya is facing North. In which new direction will he be facing if he turns clockwise through an angle 225^0?

13. Given that represent 6 cups. Draw such pictures to show 48 cups.

14. Kawonawo lent Jackson sh 84,000 on agreement that Jackson would pay back an interest of 5% in four days per week. How much money is Jackson supposed to pay back to kawonawo after the four days?

Turn Over

15. The area of parallelogram *EFGH* below is 48cm². Use it to find the length *HB* in metres.
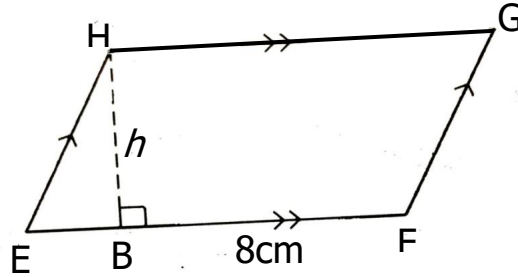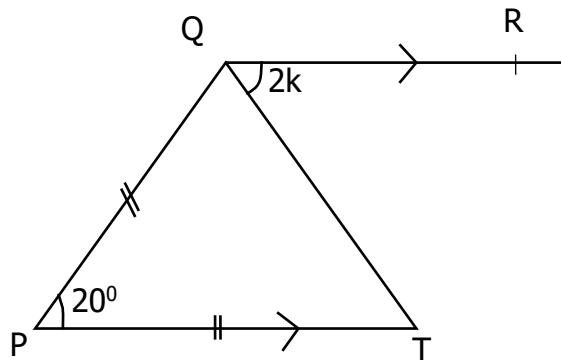

16. Joan's age is $\frac{1}{3}$ of Pit's age and William's age 7 years older than Pit. How old is William if Joan is 12 years old?

17. Using a ruler, a pencil and a pair of compasses only, construct an angle of 30^0 in the space provided below.

18. Express 360km/hr as m/s.

19. Express 12:25pm in a 24 hour clock system.

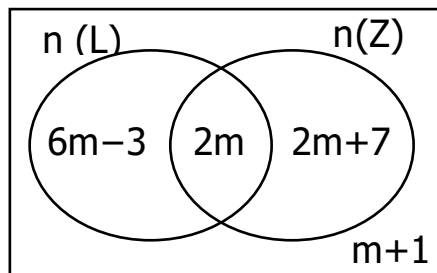20. Find the size of the angle marked PQR in the figure below.

Turn Over

21. The Venn diagram below shows the number of Lions (L) and Zebras (Z) in Kidepo Valley National Park. Given that the number of Lions *only* is equal to the number of Zebras in the park,

   (a) Find the value of m. *(02 Marks)*

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┌──────────────────────────────────┐
│ n (L)              n(Z)           │
│   ⎛      ⎛   ⎞      ⎞             │
│  ⎜6m−3 ⎜2m⎟ 2m+7 ⎟              │
│   ⎝      ⎝   ⎠      ⎠             │
│                      m+1          │
└──────────────────────────────────┘
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   (b) What is the probability of a tourist who doesn't want to see either of the two animals seeing another animal? *(03 Marks)*

22. (a) Using a pair of compasses, a ruler and pencil only, construct
a rhombus *MNOP* in which *MN* = 6cm and diagonal *NO* = 6.5cm.

(04 Marks)

(b) Measure length *MP* ……………… *(01 Mark)*

23. Cindy went for shopping in a Ugandan Supermarket with *Ksh 5,300* and bought the following items.

a watch at *Ugsh 12,000*.
4 shirts at *Ugsh 14,400* each.
2 pairs of shoes at *Ugsh 33,600*

If the exchange rate was *Ksh 1 = Ugsh 24.*

(a) Find Cindy's total expenditure in Uganda shilling*.* *(04 Marks)*

(b) Calculate Cindy's change in Uganda shilling. *(01 Marks)*

Turn Over

24. Zaharah had some milk in container **A** which she used to serve to her children using cup **B** of radius 7cm and a height of 10cm.

(6x −2)cm

(17x+2)cm

A

(14−x)cm

(2x +14)cm

7cm

B
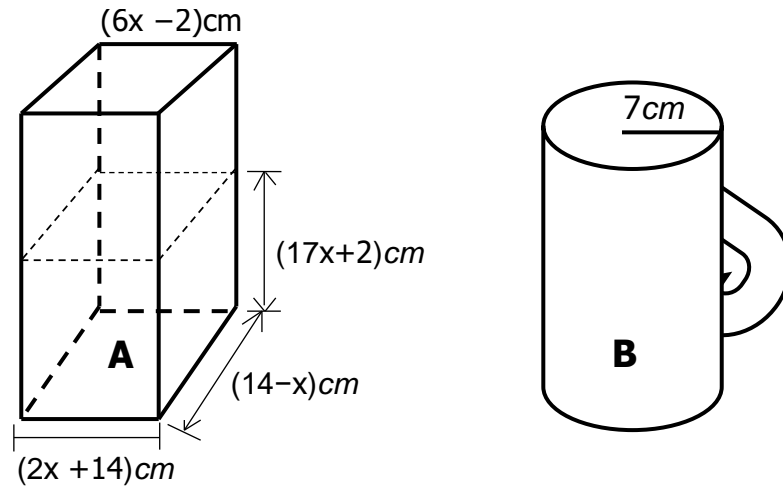
How many children did Zaharah have if she gave a full cup of milk to each of her children? (Use $\pi = \frac{22}{7}$)

(06 Marks)

25. Peter's car uses 15 litres of petrol to cover 75km.

   (a) How much petrol does he need for a journey of 1050km?

(02 marks)

(b)   If a litre of petrol costs Sh. 3400. How much money will be spent on petrol needed to run a car for 1½hours at a speed of 60km/hr?   *(03 marks)*

26.   (a)   Fabrio's bicycle tyre has a diameter of 63cm. If he rides 3.96km to and from school every day, how many complete revolutions does his tyre make through that distance?

$(\text{Use } \pi = \frac{22}{7})$ *(03 Marks)*

(b)   If Fabrio's bicycle tyre makes 50 revolutions per minute, how long does it take him to cover the distance?   *(02 Marks)*
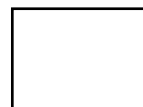
27. During the registration exercise for National IDs', Kalibbala
    was asked the following questions by the NIRA official.

    NIRA official: Kalibbala, how old are you?
    Kalibbala: I don't know, but what I know is that my age is half my
                    mother's age.

    NIRA official: So, how old is your mother?

    Kalibbala: I still don't know, but my mother is 5 years younger than
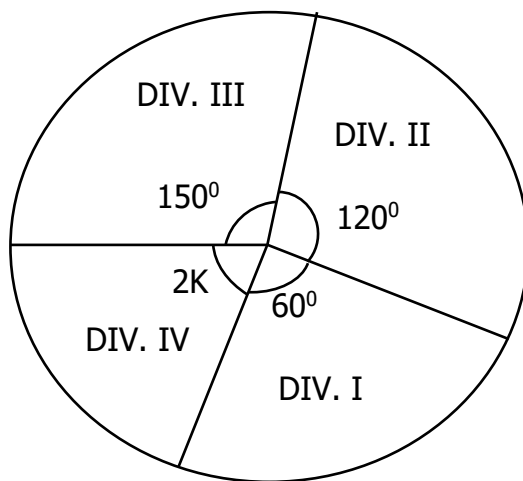   my father.

    NIRA official: How old is your father?

    Kalibbala: I don't know, but if you add our ages, we get 100 years.

    (a) How old is Kalibbala and each of his parents?   *(04 Marks)*

    (b) After how many years ago was the father 3 times as old as
         Kalibbala?   *(02 Marks)*

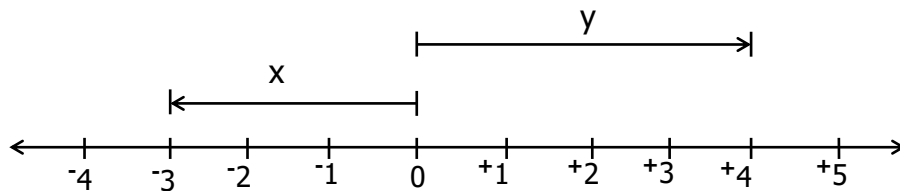28. The Pie Chart below shows the performance of 60 candidates at Peyepeye P/S.

DIV. III

DIV. II

150^0

120^0

2K

60^0

DIV. IV

DIV. I

(a) Find the value of k. *(02 Marks)*

(b) Find the number of candidates who passed in division four and division one. *(02 Marks)*

Turn Over

29. (a) Use the number line below to find the value of x , y and z.

(03 Marks)

X .... y .... z ....

(b) Write the mathematical sentence represented above. (01 Mark)

30. In a class, $\frac{1}{3}$ of the pupils eat posho, $\frac{2}{5}$ of the remainder eat matooke, the rest of the pupils eat rice. If those who eat rice are 42, find the total number of pupils who eat posho and matooke.

(05 Marks)

31. (a) Change 1234_{six} to base ten. (02 Marks)

(b) What is the value of 4 in the number 1241_{five}? (02 Marks)

32. (a) Given that **y = x + 1,** complete the table below (04 Marks)

x	⁻3	____	⁻1	____
y	____	⁻1	____	1

Turn Over

(b)   Plot the points in the table above on the co-ordinate graph
       below and join all the points.   *(02 Marks)*

16   **END**