NEXUS EXAMINATIONS BOARD

PRIMARY LEAVING MOCK EXAMINATION 2023

MATHEMATICS

Time Allowed: 2 hours 30 minutes

Index Number:	**Random No.**						**Personal No.**		

Candidate's Name: ……

Candidate's Signature: ……

School Name: ……

District Name:……

Read the following instructions carefully:

1. Do not forget to write your **school** and **district name** on this paper.
2. This paper has two sections: **A** and **B**. Section **A** has **20** questions and Section **B** has **12** questions.
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

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

Turn Over

SECTION A: 40 MARKS

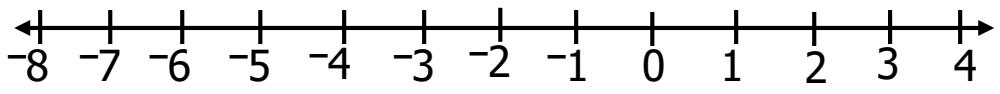
Answer **all** questions in this Section
Questions **1** to **20** carry two marks each

1. Workout: 43 x 2

2. Simplify: 5d-2(4+2d)

3. Write "**four hundred thousand, fifteen**" in figures.

4. Workout: $^{-}5+ +7$ using the number line below.

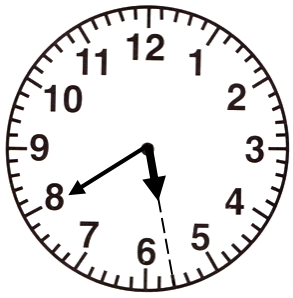


5. Simplify: $\frac{3}{4} \div 1\frac{1}{2}$

6. Find the next number in the sequence;

   54, 52, 49, 44, 37, ...

7. Write the morning time shown on the clock face below in 24 hour clock system.



8. Set D has 16 subsets. How many proper subsets are in set D?

9. Calculate the least number of oranges that can be shared among 16 or 36 pupils leaving only 5 oranges.

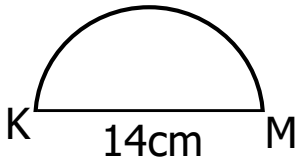
10. Solve for m: 3m – 4=1(finite 5)

11. A school truck consumes 15 litres of fuel for every 90 km. How much fuel does it need to cover 36Km?

12. Using a ruler, a pencil and a pair of compasses only, construct an angle of 105^0.

13. Convert 17ten to binary system.

14. Find the length of arc KL in the figure below.



15. In a class, the ratio of boys to girls is 5:2 respectively. Find the total number of pupils in the entire class if there are 24 girls.

16. The LCM of 5x and 4x is 60. If their GCF is 3, find the value of x.

17. Find the number which has been expanded below;

$(6x10^3) + (4x10^1) + (3x10^0) + (7x10^{-2})$

18. A shopkeeper bought 48litres of paraffin. He later sold it using bottles of 300 millilitres each. How many such bottles did he sell?

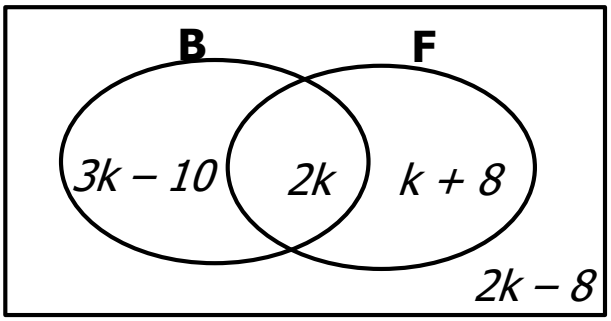
19. Given that **p=3r**, **q=⁻3** and **r=⁻4**. Evaluate **r(q – p).**

20. A motorist covered a distance of 54Km in 45 minutes. Work out his speed in kilometres per hour.

SECTION B: 60 MARKS

Answer **all** questions in this section
Marks for each question are indicated in brackets

21. The Venn diagram below shows the number of pupils who play Basketball (B), Football (F) and other games in a class.



a) If 17 pupils don't play football, find the value of r. (2 marks)

b) How many pupils are in the class altogether? (2 marks)

c) Find the probability of picking a pupil who likes football to be the class leader. (2 marks)

22. Use the digits **0**, **7**, **3** and **4** to answer questions below.

a) Form the biggest and smallest four digit numerals. (01 mark each)

Biggest ……

Smallest……..

b) Express the smallest four-digit numeral in standard form. (2 marks)

c) Round off the biggest numeral formed to the nearest hundreds.

(2 marks)

23. A farmer sold coffee and got 40 notes of different denominations as shown below. Complete it correctly (5 marks)

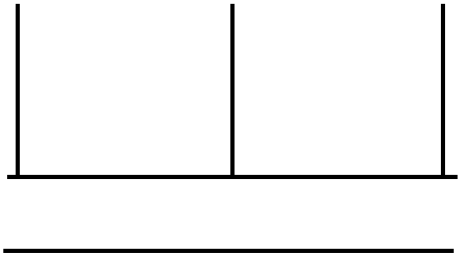
Denomination.	Number of notes.	Amount
Sh20,000	7	Sh140,000
Sh2,000	11	Sh.....
Sh.....	6	Sh30,000
Sh1,000	.....	Sh.....
Total		Sh.....

24. A taxi left town Q at 11:30a.m traveling at a speed of 60Km/h and reached town R at 1:00p.m. He stayed at R for 30 minutes before continuing to town P, a distance of 80Km at a speed of 40Km/h.

a) How far is town R from town Q? (3 marks)

b) At what time did the taxi reach town P? (2 marks)

25. a) Represent 142five on the abacus below. (2 marks)



b) Given that $101_{two} + 2_{five} = 20_n$. Find base n. (3 marks)

26. a) Express 0.4848... as a simplified vulgar fraction. (2 marks)

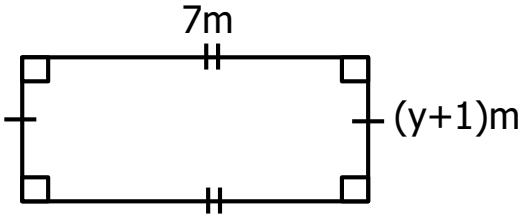
b) Simplify: $\frac{2.4 \text{ x } 0.54}{3-2.88}$ (3 marks)

27. The average of four consecutive odd numbers is 14. If the biggest number is r,

a) Find the value of r. (3 marks)

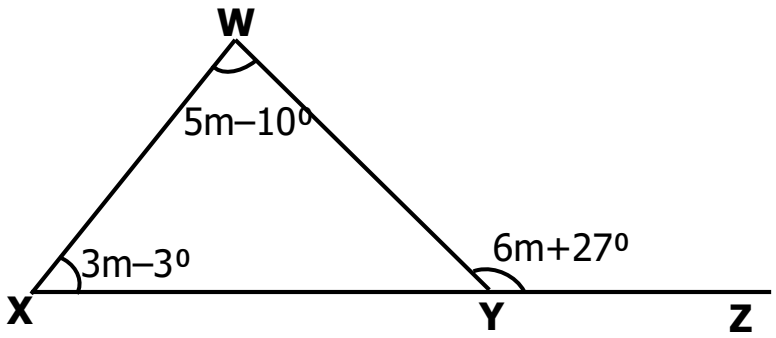
b) Calculate the range of the numbers (2 marks)

28. A barbed wire of 60 metres long was used to fence the rectangular garden shown below 3 times.



Workout the value of y. (4 marks)

29. In the figure below, XYZ is a straight line, angle WYZ=6m+27⁰, WXY=3m-3⁰ and angle XWY=5m-10⁰.



a) Find the value of m. (3 marks)

b) Calculate the size of angle XYW. (2 marks)

30. Pele is 58years old and Imran is 14 years old.

(a) How old will Imran be when Pele is thrice as old as him? (3 marks)

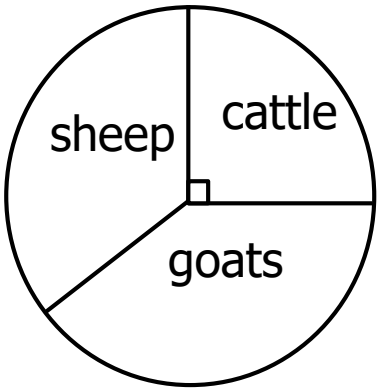
(b) How old will Pele be then? (1 mark)

31. a) Using a ruler, a pencil and a pair of compasses only, construct a regular quadrilateral PQRS, whose diagonals are PR=QS=8cm.

(4 marks)

b) Measure the length of line PQ.....cm. (1 mark)

32. The pie chart below shows the 144 animals on Matende's farm. Study it carefully and answer questions about it.



a) If there are 48 goats, find the angle sector for goats. (2 marks)

b) Express the number of sheep as a ratio of the total number of animals on the farm. (3 marks)

END