NERDS EXAMINATIONS SERIES

SPECIAL PRE-PLE MOCK (SET 1) 2024

MATHEMATICS

Time allowed: 2 Hours 30 Minutes

Random No.						Person No.		

Candidate's Name .....

Candidate's Signature .....

District Name.....

Read the following instructions carefully:

1. This paper has **two Sections: A** and **B**.
2. Answer **all** questions. All answers to bothsections **A** and **B** must be written in the spaces provided.
3. All answers must be done using a blue orblack ball-point pen or fountain pen.
4. Unnecessary changes of work may lead to lossof marks.
5. Any handwriting that cannot be easily readmay lead to loss of marks.
6. Do not fill anything in the boxes indicated:**"For Examiners' Use Only"** and those inside the question paper.

FOR EXAMINERS' USE ONLY		
Qn. No.	**Marks**	**EXRS' NO.**
01 -05		
06 - 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

Each question carries 2 marks

1. Fill the spaces; 54 = _____tens ____ones.

2. Solve for x: $\frac{2x}{5} = 6$

3. Find the smaller angle between North and Southeast.

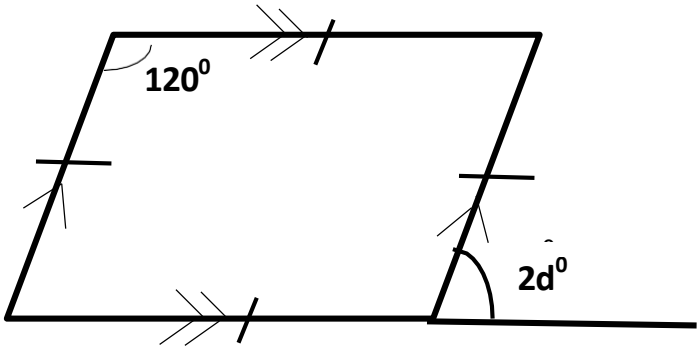
4. Work out $2\frac{1}{3} - \frac{1}{4}$

5. Convert 0.266… as a common fraction in its lowest term.

6. Kadu is thrice as old as Aminah now. Their age difference is 14years. How old will Aminah be after 10 years from now?

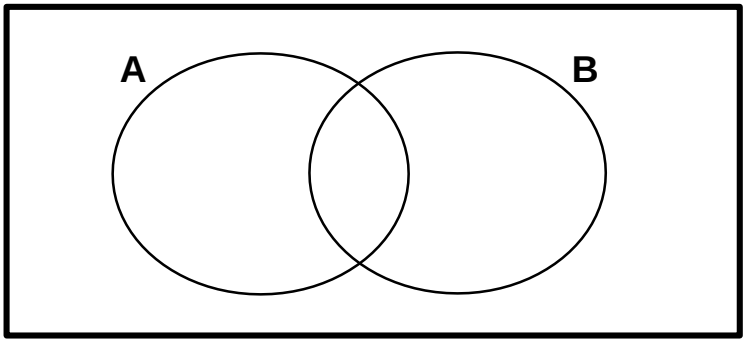
7. Express $2\frac{2}{3} hours\ to\ seconds$

8. Use the diagram below to find the value of d.



9. In an examination, Sandra scored the following marks 80, 70, 60, 90. Work out her median mark.

10. Shade (AUB)' €



11. Work out: 2.4 – 0.6 +6

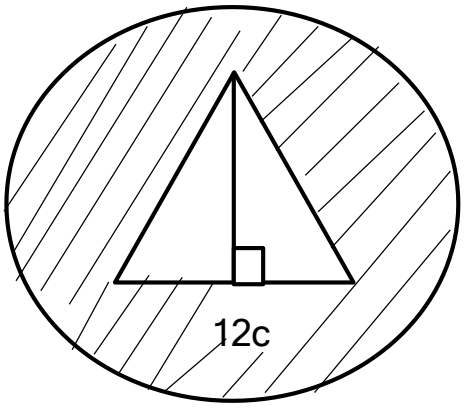
12. Asado bought a tray of eggs at shs 12,000.How much can she sell each egg in order to make a profit of shs.6000?

13. Change 108km/h to metres per second.

14. Work out: $2 \div 4 = \_ \pmod 6$ using a dial.

15. Express 64 as a product of its prime factors.

16. A triangle was enclosed in a circle whose radius is 14cm as shown below.



If the area of the shaded part is $556cm^2$, find the area of the triangle.

17. Work out $\left(\frac{1}{4}X20\right) + \left(16X\frac{1}{4}\right) using distributive\ property$

18. Draw a net of a cone in the space below.

19. Write 2.49 x 10^{-2} as a single number.

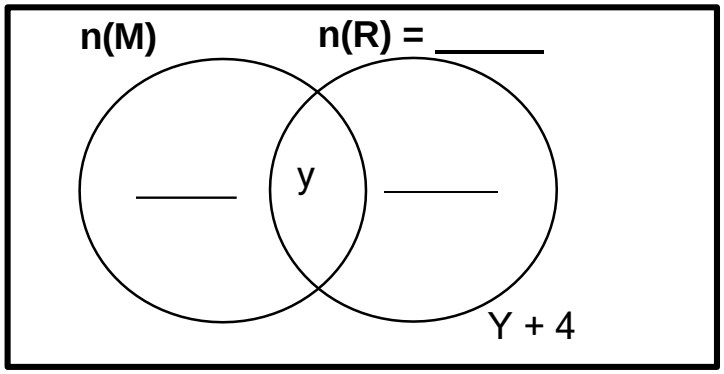
20. During kyabazinga's wedding, his car was in the third position from in front of the line and 26^{th} from behind. How many cars were in the line?

SECTION B (60 Marks)

21. Odong bought a tray of eggs at shs. 500 per egg. On his way home, some eggs got broken and he sold the remaining eggs at shs 600 per egg making a loss of shs. 600. How many eggs got broken? ***(5 marks)***

21. During primary seven meeting at a certain school, (y+15) parents ate Rice(R), 16 parents ate Matooke (M) only, (y+4) ate neither of the two food stuff and y parents ate both Matooke and Rice.

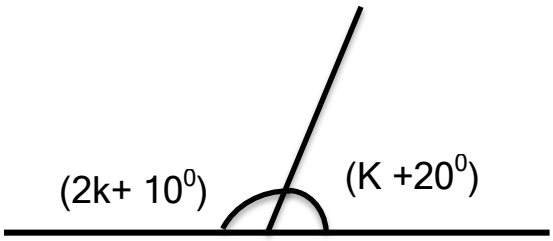
a) Complete the Venn diagram below. ***(3marks)***



b) Given that 40 parents did not eat rice. How many parents ate more than one type of food? ***(2marks)***

23 a) Angles of an acute triangle are in the ratio 2:3:4 respectively. Find the size of each angle. ***(3 marks)***

b) Find the value of K in degrees. **(2marks)**



24. Use digits 4, 0, 2 and 6.

a) Form the smallest 4- digit number. **(1 mark)**

b) Write the largest 4-digit number formed in words. **(1 mark)**

c) Find the quotient of the value of 2 and the place value of 4 in the smallest 4 digit number formed in a) above. **(2marks)**

25. a) find the multiplicative inverse of $\frac{2}{3}$ **(2 marks)**

c) find the value of t : $\frac{0.39t}{1.3X0.08} = 0.9$ **(4 marks)**

26. Two dice were tossed once. What is the probability that a sum was 8? (4marks)

27. Kato went shopping with five thousand shillings notes numbered consecutively from CF9812671 to CF9812680 and bought the following items. **(6 marks)**

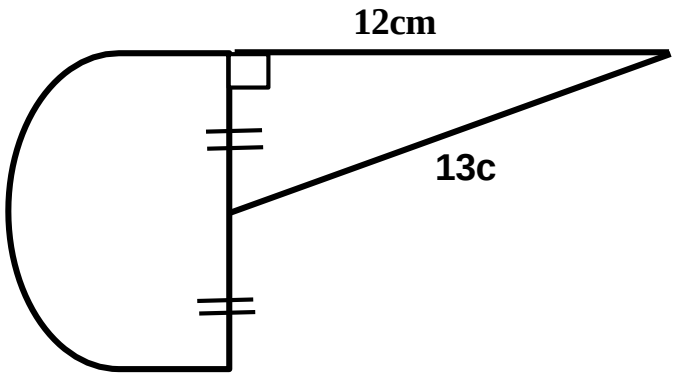
2kg of sugar at shs.4000perkg

250ml of cooking oil at shs.7000per litre

A dozen of pens at shs. 500 for every 2 pens.

How much money did he remain with?

28. Study the figure below and use it to answer the questions that follow. (5marks)



Calculate the total distance round the above figure. (Use π = 3.14)

29. The sum of 3 consecutive multiple of two is 126.If the least multiple is 2m – 2.

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

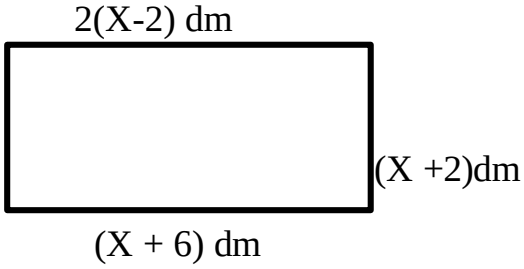
b) Find the square of the third multiple. (2marks)

30. A driver left town A at a speed of 40km/h for 3 hours to town B. HE rested for 30 minutes at town B, then he continued to town C at a speed of 20km/h for $1\frac{1}{2}$ hours.

a) How far is town C from A? (3 marks)

b) Calculate the driver's average speed for the whole journey. (2marks)

31. Use the figure below to answer questions that follow.



a) Find the value of X. **(3marks)**

b) Calculate its area. **(2marks)**

32. The school is 70km Northeast of the trading center and our home is 50km on a bearing of 135 from the school.

Draw an accurate diagram showing the above information. Use 1cm to represent 10km. (5marks)

****END****