



KYLA EDUCATIONAL SUPPLIES LTD
END OF TERM ONE SPECIAL ASSESSMENT
2023

MATHEMATICS

Time allowed: 2 hours 30 minutes

Index No.

Random No.						Personal No.		

Candidate's name :

Candidate's signature :

School Random number :

District No. :

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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 **15 printed pages**.
3. Answer **all** questions. **All** the working for both sections **A** and **B** must be shown in the spaces provides.
4. **All** working **must** be done using a **blue** or **black** ball point pen or ink. Any work done in pencils 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 be read easily 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

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

1. Work out: $3b + 2b$

2. Write 1,012 in words.

.....
.....

3. Work out: $16 - 10 \div 2$.

4. Circle all the composite numbers in the list below.

5, 6, 7, 8, 11

5. Find the value of 3 and the place value of 7 in the number 3,074.

6. Round off 498 to the nearest tens.

7. Simplify: $(-5) - (+2)$

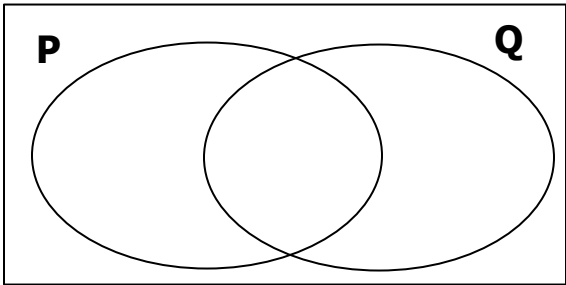
8. Using a pair of compasses, a ruler and a pencil only, bisect the line below.



9. Write LXXVII in Hindu Arabic numerals.

10. Change 2.5 metres into centimetres.

11. In the Venn diagram below, shade the region which represents $(P-Q)^I$.



12. Find the mean of the following numbers. 4, 7, 8, 5

13. Work out:

$$\begin{array}{r} 6702 \\ - 4865 \\ \hline \hline \end{array}$$

14. Given that $m = 5$, $n = 3$ and $r = -2$, find the value of $\frac{mn}{n-r}$

15. Find the next number in the sequence: 23, 19, 16, 14, _____

16. Solve $\frac{2}{5}k = 4$

17. Peter rode a bicycle at an average speed of 4km/h for $2\frac{1}{2}$ hours. Calculate the distance he covered.

18. In a bucket, 4 rotten eggs are mixed up with 3 good eggs. If an egg is picked at random from the bucket, what is the probability of picking a good egg?

19. Express 0.406 in standard form.

20. In a line of vehicles, a bus was the 7th from each end of the line. How many vehicles were in the line?

SECTION B: 60 MARKS

Answer **all** questions in this section

Marks for **each** question are indicated in the **brackets**.

21. A farmer has Sh 120,000 to buy mango, orange and apple trees. A mango tree costs Sh 3,000, an orange tree costs Sh 2,500 and an apple tree costs Sh 4,000.

If the farmer bought 8 mango trees and 14 apple trees, how many orange trees did the farmer buy? *(05 marks)*

22. (a) Expand 789 using powers of 10. *(02 marks)*

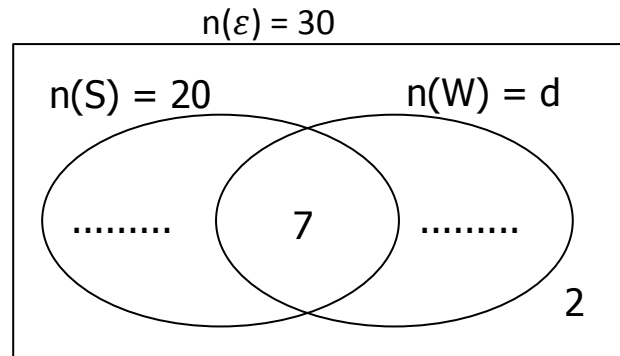
- (b) Express 24 as a product of its prime factors. *(02 marks)*



23. In a class of 30 pupils, two types of drinks were served. Soda (S) and Mineral Water (W). 7 pupils took both Soda and Mineral Water, 20 pupils took Soda and d pupils took mineral water while 2 pupils took neither of the drinks.

(a) Use the information given above to complete the Venn diagram below.

(02 marks)



(b) Find the value of d.

(02 marks)

(c) How many pupils took mineral water only?

(01 mark)

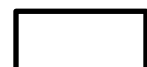
24. Using a ruler, a pencil and a pair of compasses only,

(a) Construct a triangle EFG such that $EF = 4\text{cm}$, $FG = 6\text{cm}$ and angle $EFG = 135^\circ$.

(04 marks)

(b) Measure the length of EG.....cm

(01 mark)



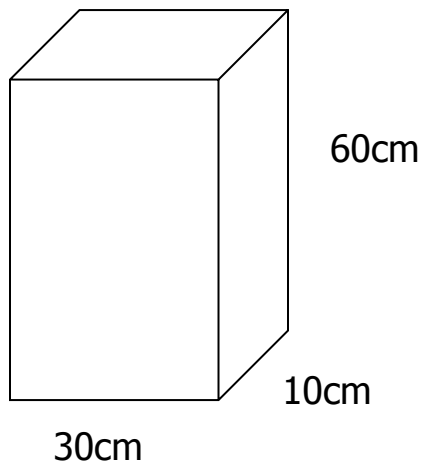
25. (a) Simplify: $\frac{b^2 \times b^5}{b^3}$

(02 marks)

(b) Solve the equation: $5t - 2(t + 1) = 1$

(03 marks)

26. The diagram below shows a tank full of water. The edges of the tank are made up of wire. Study the diagram and use it to answer the questions that follow.



- (a) Find the length of the wire used to make the tank.

(02 marks)

- (b) Calculate the amount of water in litres that are in the tank. (03 marks)



27. (a) work out:
$$\begin{array}{r} 334_{\text{five}} \\ +123_{\text{five}} \\ \hline \end{array}$$
 (02 marks)

(b) Convert 102_{three} to binary base (04 marks)

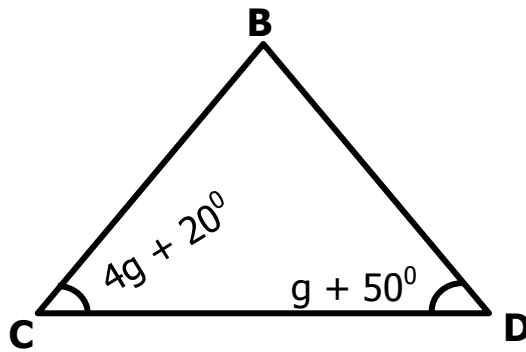
28. At Aguti primary school, two bells ring at intervals of 30 minutes and 40 minutes for both lower and upper primary classes respectively.
How many lessons will each class have had by the time all the bells ring together? (04 marks)



29. A teacher wrote 3-digit numbers using the digits 4, 9 and 5.
(a) Write down all the possible 3-digit numbers that the teacher wrote. (03 marks)

- (b) Without dividing, show all the possible 3-digit numbers divisible by 11 that the teacher wrote. *(03 marks)*

30. In the figure below, $\angle CBD = 84^\circ$
Study the figure and use it to answer the questions that follow.



- (a) Find the value of g . *(02 marks)*

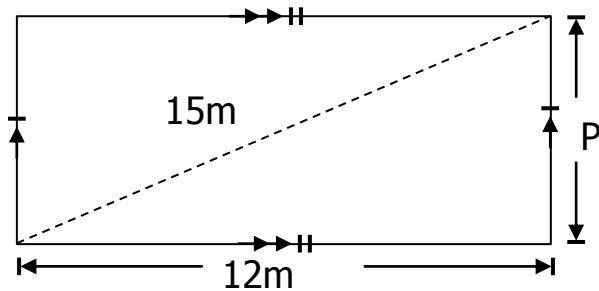
- (b) Calculate the size of angle $\angle CBD$. *(03 marks)*



31. The sum of three consecutive multiples of 5 is 60.
Find their median

(04 marks)

32. The figure below represents a parking yard. The diagonal of the parking yard is 15m and the length is 12m. Study the figure and use it to answer the questions that follow.



- (a) Find the width of the parking yard.

(03 marks)

- (b) Calculate the number of cars that can fill the parking yard if each parked car occupies a space measuring 3m by 2m.

(03 marks)

