KYLA EDUCATIONAL SUPPLIES LTD

PRIMARY LEAVING EXAMINATIONS

2022

MATHEMATICS

Time allowed: 2 hours 30 minutes

Index No.	Random No.						Personal No.		

Candidate's name : .....

Candidate's signature : .....

School Random number : .....

District No. :

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		

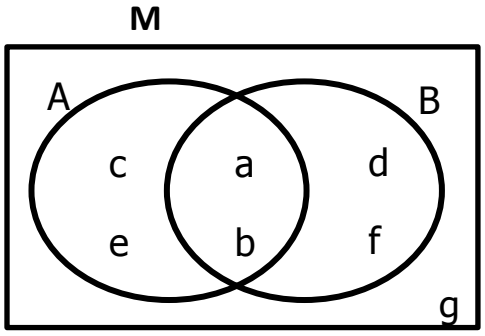
SECTION A
Answer all questions in this section
Questions 1 to 20 carry two marks each

1. Work out: $42 + 63$

2. Simplify: $3m + 4m - 5m$

3. Work out: $\frac{8}{13} \div \frac{4}{39}$

4. The Venn diagram below shows the subsets of set M. Use the Venn diagram to find $n(A - B)'$

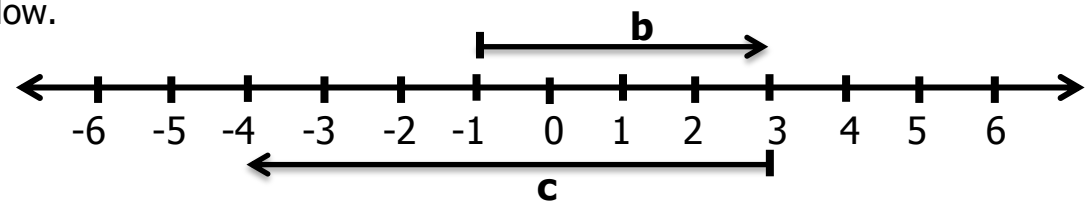


5. Without dividing, show which of the numbers 569 and 7893 is divisible by 9.

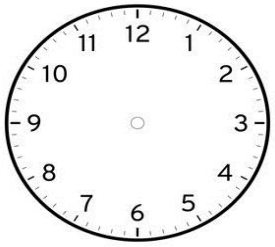
6. Work out: $1011_{two} \times 11_{two}$

7. A die is tossed once. What is the probability that a number greater than 4 will appear on top?

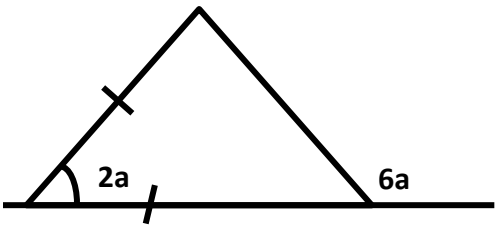
8. Write the additive inverse of the integers represented by letters b and c on the number line below.



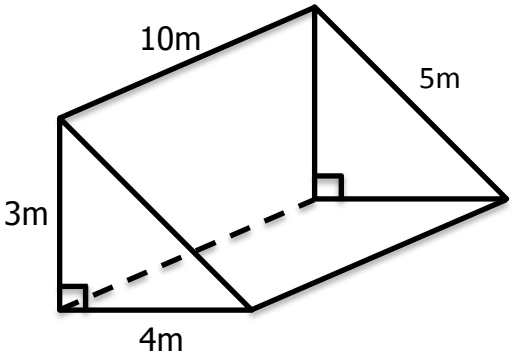
9. Show the time. "Twenty seven minutes to 12 o'clock" on the clock face below.



10. In the figure below, find the size of angle marked **a**.



11. The figure below shows a triangular prism. If a wire is tied along all the edges, find the total length of all the edges.



Turn Over

12. Convert $99\frac{1}{4}\%$ to fraction in its lowest term.

13. The prime factors of P and Q are given below.

    $P = 2^3 \times 5^1$

    $Q = 2 \times 5^2$

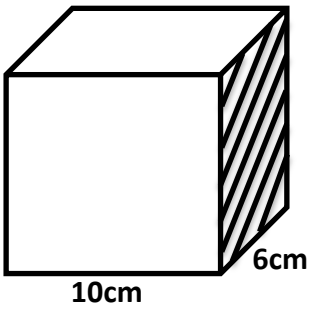
    Use the given prime factors above to find the greatest common factor (GCF) of P and Q.

14. A trader sold four shirts at sh 96, 000 making a profit of sh 12, 000.At what price did the trader buy each shirt?

15. There are 12 electric poles in a straight line. If the distance from the first pole to the 12^{th} pole is 220 metres, find the interval between the poles?

16. The cost of $1\frac{1}{2}kg$ of beans is sh 3600. Find the cost of 250 grams of beans.

17. The perimeter of the shaded part of the cuboid below is 20cm. Calculate the volume of the cuboid.



18. Nicholas drove from Town A to Town B at a speed of 25 metres per second. Calculate his average speed in kilometers per hour.

19. Using a ruler, a pencil and a pair of compasses only, construct an angle of 165^0 in the space below.

20. In a school, there are 20% more girls than boys. If there are 480 boys, find the number of girls in the school.

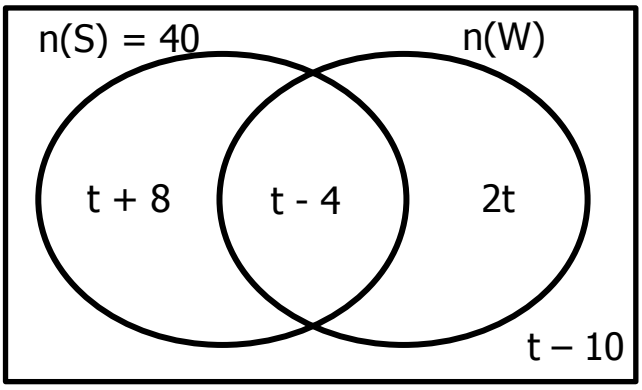
Turn Over

SECTION B: 60 MARKS

Answer all questions in this section.

Marks for each question are indicated in the brackets.

21. The Venn diagram below shows people at a birthday party who took Soda (S), water (W) and other drinks. Study the Venn diagram and use it to answer the question that follows:



Calculate the total number of people who attended the birthday party. (04 marks)

22. (a) What number has been expanded below? (03 marks)

$(6 \times 10^3) + (4 \times 10^1) + (8 \times 10^0) + (5 \times 10^{-2})$

(b) Work out: $(6 \times 97) + (97 \times 4)$ (02 marks)

23. (a) Work out: $\frac{0.28\times0.08}{1.4\times0.4}$ (03 marks)

(b)Express the recurring decimal 0.4545……. as a common fraction in its simplest form. (02 marks)

24. The exchange rate for Kenya shillings (KSh) to Uganda shillings and United States Dollars (US $) to Uganda are shown below:

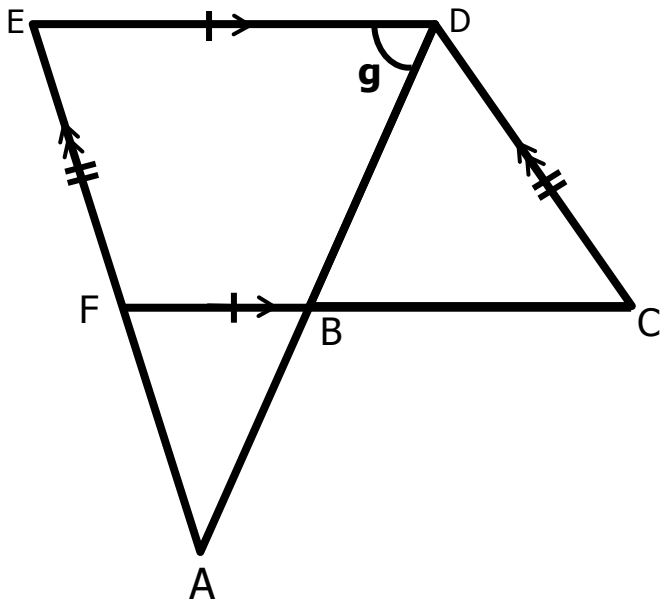
1 Kenya shillings (KSh) costs UgSh.35.

I United States Dollar (US $) costs UgSh.3634.

(a) The travel fare from Uganda to United States of America is worth (US $) 4,200. Calculate the fare in Uganda shillings. (02 marks)

(b) If a car costs KSh 254,380, find the equivalent cost of the car in United States Dollars. (03 marks)

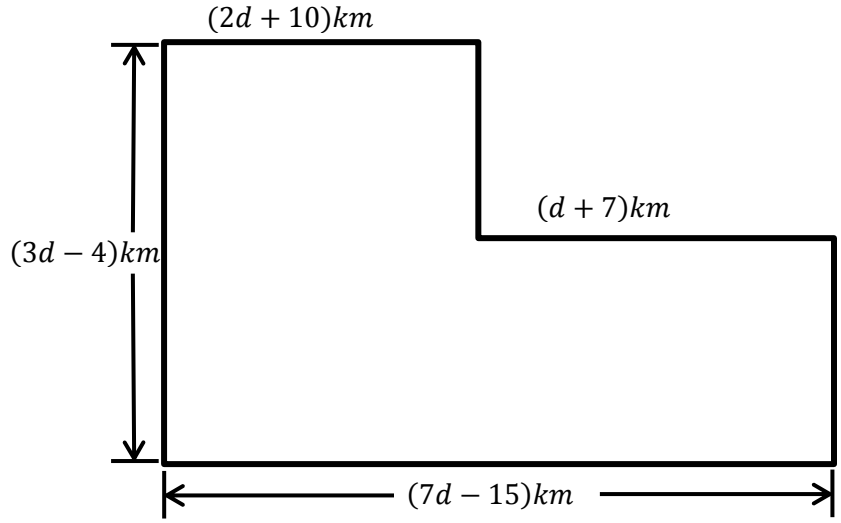
25. The diagram below is made up of a quadrilateral CDEF and triangle ABF. ED is parallel to FC. Angle $DEF = 80^0$ and angle $CDB = 46^0$.Study and use it to answer the questions that follow.



(a) Find the value of g (02 marks)

(b) Calculate the size angle ABC (02 marks)

26. The figure below represents a grazing plot of land which is fenced by poles of interval 40metres apart. Use it to answer the questions that follow:



(a) Calculate the perimeter of the grazing plot of land. (04 marks)

(b) If each pole costs sh.2, 000, how much does the farmer spend on all the poles? (02 marks)

27. Mutono drove from town A to town B for 2 hours and 30 minutes at a steady speed of 90 kilometers per hour. He left town B at 10: 10a.m and drove back to town A. Using the same route at a steady speed of 100 kilometers per hour.

(a) At what time did Mutoni arrive at town A? (03 marks)

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(b) Calculate his average speed for the whole journey. (02 marks)

28. Hajati bought a television set at sh.400, 000. She had sh.300, 000 cash and borrowed the rest at a rate of $7\frac{1}{2}\%$ per year for 8 months.

(a) Find the interest rate after 8 months. (03 marks)

(b) Calculate the total amount of money Hajati spent on the television set. (02 marks)

29. Mulimi bought the following items from a shop for sell in his shop.

(i) 50kg of maize flour at sh.125, 000.

(ii) 100kg of beans at sh.250, 000

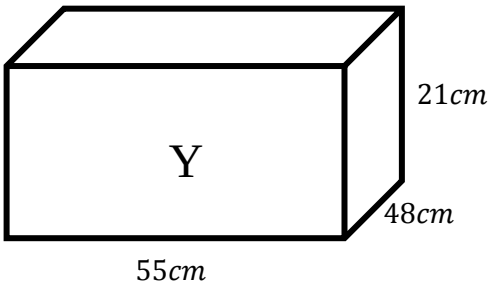
(iii) 150kg of groundnuts at sh.525, 000

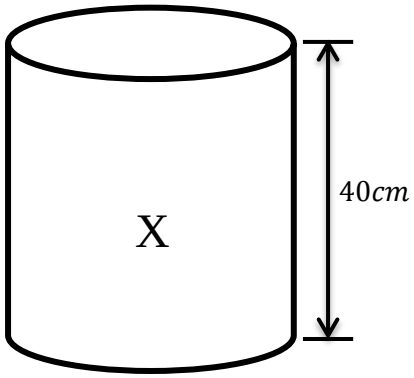
(a) if he wants to make a profit of 20%, at what price must he sell each kilogram of maize flour? (02 marks)

(b) If he sold each kilogram of groundnuts at sh.4, 000. Calculate his total profit on groundnuts. (02 marks)

(c) Mulimi sold all the beans and made a loss of 20%.What was his selling price for a kilogram of beans? (02 marks)

30. The tanks shown below have the same volume when completely filled with cooking oil.





Calculate the diameter of tank **X**. (Use $\pi\ as\ \frac{22}{7}$) (04 marks)

31. (a) Solve the inequality: $\frac{1}{2}n + 4 \geq 2n - 2$. (03 marks)

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(b) State the first 3 values of the solution set for the above inequality. (01 mark)

32. A school canteen is 46 meters away from the kitchen on a bearing of 140^0 and the library is 74 metres west of the kitchen.

(a) Using a scale of 1cm to represent 10 metres, show the three places on an accurate diagram. (04 marks)

(b) Find the shortest distance between the library and the canteen (02 marks)

END