



RWENZORI REGION SESEMAT

S.3 MATHEMATICS

END OF YEAR ASSESSMENT 2023

TIME..... 2 HRS

Instructions:

- Answer all questions in Section **A** and any two in section **B**
- Each question in section **A** carries **5** scores and each question in section **B** carries **15** scores.
- Show all the working and necessary explanation on the answer sheet provided

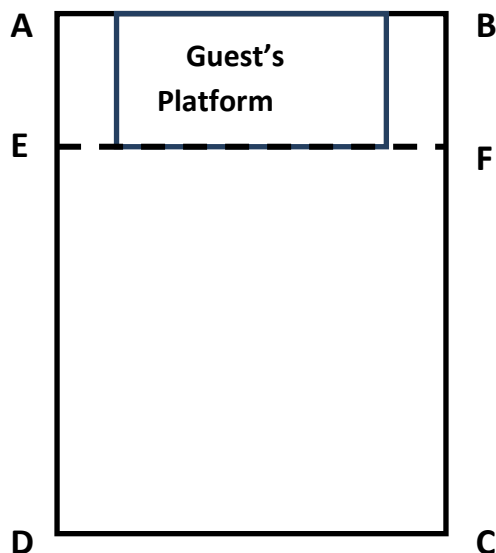
Section A (50 scores)

- Matata a taxi operator and chairperson of K-Taxi Operators Union is to implement the union's resolution of "every minibus leaves the stage 30 minutes after the previous one and every small van leaves the stage after the previous one". 9:00am is the second time in the day both the minibus and the van leave the stage at once as the passengers are many.

Task: As a student of mathematics, help Matata to establish when the first minibus and van will leave the stage at the same time for proper planning.

(05 scores)

2.



ABCD is a rectangular classroom for S3C, planning to hold a party. The room is longer along ED and shorter along EF. ABFE is the space reserved for the guests and the students will use EFCD as in the **fig 1**, above. There are 40 students in form 3C.

Task: Assist the class monitor to determine the maximum number of columns to create while arranging seats. **(05 Score)**

3. As you are coming from school, you meet your teacher Kamara buying fire wood. He wants to buy 9 bundles each containing 3 pieces as shown in **fig 2**, below. However Mr Kamara wants to carry the firewood home only 4times carrying the same number of pieces



Figure 2

Task: Help Mr Kamara to establish the maximum number of pieces he should tie in each new bundle. **(05 Score)**

4. Musa is attending driving classes and as he tries to park the car in the yard, he noticed that the sign post was upside down as shown in the **figure 3** below

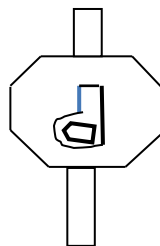


Figure 3

Originally the sign post had two screws holding it in the right position and Musa wants to fix it.

Task: Help Musa to identify the;

- (i) Screw that acted as the centre of rotation as the sign post moved

(ii) Angle Musa turned to re-fix the sign post. **(05 Score)**

5. In Bakasoma village, the Village Health Team (VHT) obtained data from a sample of 118 children who were suspected to have skin rash (R) and Cough (C). 32 children had not suffered from either of the two diseases, 64 children had suffered from skin rash, while 32 had suffered from cough.

Task: As a student of mathematics assist the VHT to determine the number of children who should be treated for both diseases. **(05 Scores)**

6. The structure below **fig 4**, shows a tent marked ABCDE to be hired for your sister's birth day party. BC is 10m EC = CD = 4m and DE = 6m. The compound available is rectangular form covering an area of 100m². Your father doubts whether the tent will fit on the available space in the compound, before he pays for it.

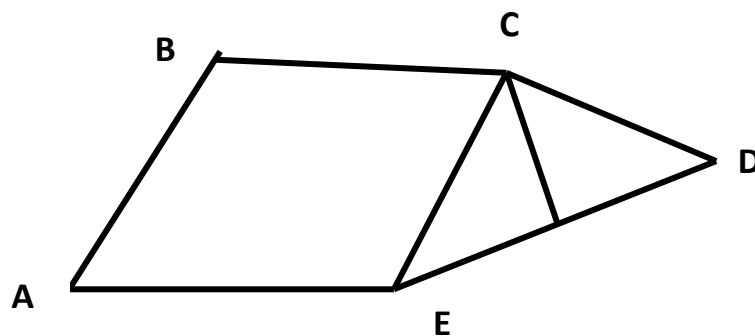


Figure 4

Task: Assist your father to determine whether the tent will fit or not.

(05 Scores)

7. A customer came to your Mum's shop to buy $3\frac{1}{2}$ kg of sugar. Your mum found out that the 1 kg packs of sugar are out of stock and only the 500g packs are available. Your mum thinks of sending the customer to the neighbour's shop.

TASK: Assist your mum to determine the number of packs to give the customer.

(05 scores)

8. In Kogere Town Council, a plot of land costs sh. 20,000,000= . The seller allows a 10% cash discount and a broker is entitled to a 5% commission of

the amount paid by the buyer. Mr. Tunda is a business broker but he is worried that he may be cheated if he sells this land.

Task: Assist Mr. Tunda to determine how much money he will receive when the land is paid for **(05 Scores)**

9. Kemitu wants your sister to find the height of a tree which she can't climb. She gave your sister some data based on her daughter's height comparing it with the length of the daughter's shadow and the shadow of the tree.

	Actual height	Length of shadow
Tree	-----	210 cm
Daughter	150 cm	50 cm

Figure 5

Task: As a student of mathematics, assist your sister to determine the height of the tree. **(05 Scores)**

10. Four girls Anna, Betty, Charity and Dorothy are sisters. Anna decide to put the first letters of their names in a grid below starting with herself at the origin

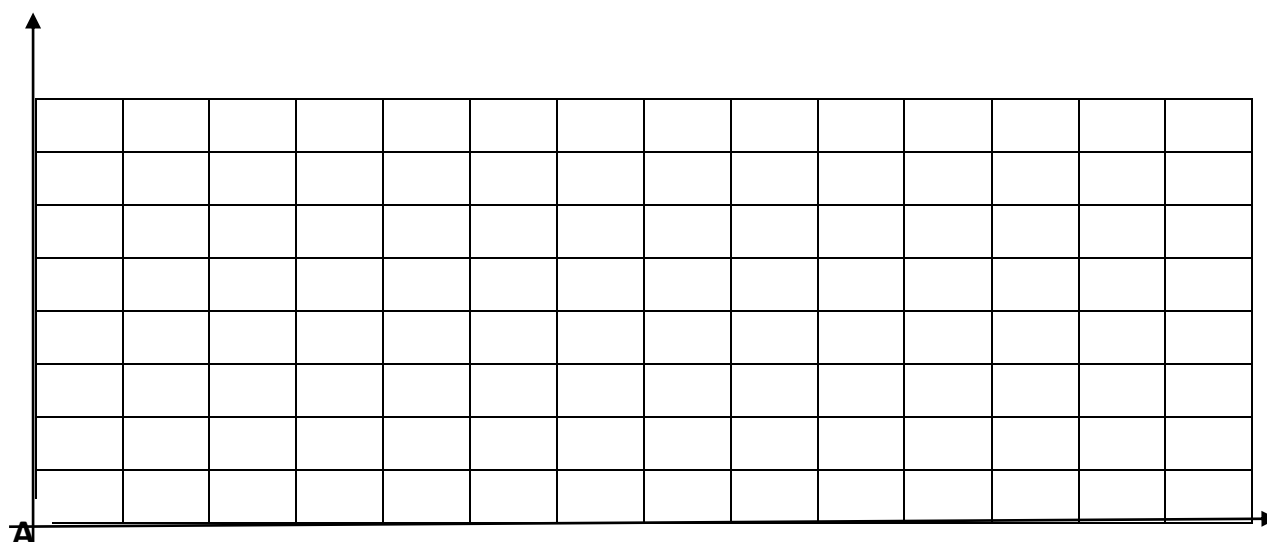


Figure 6

She places the sister's initial letters with Betty 4cm above her and Dorothy 4 cm to her right. Charity is placed such that the 4 letters complete a square, the boxes in the grid are 1 cm apart.

X Task: Assist Anna to locate the accurate position of Charity and state the coordinates of her position. **(05 Scores)**

Section B (60 scores)

11. Your friend Carol tells you about a lottery her dad won and his intention to share it out as follows; half of the money on Carol's school fees, sh. 50,000 on food items, and 40% of the remaining amount on Carols' present for performing well in school. He remains with sh. 120,000. Carol is very excited because she is going to receive money as a present from her dad for doing well at school, but she doesn't know how much money she will receive.

Task: Assist her to determine this amount. **(15 Scores)**

12. Kabalime intend divides his rectangular garden **ABCD** of sides **a** and **b** into two equal parts. He uses one of the parts **ACD** for planting beans as shown in **fig 7**. Side **b** is twice as long as side **a** and the area of the garden of beans is 2000m^2

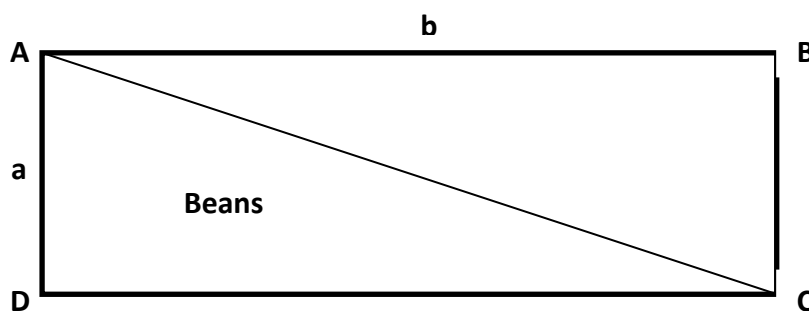


Figure 7

Task: Help Kabalime to determine the length of wire he needs to enclose the garden ABCD three times.

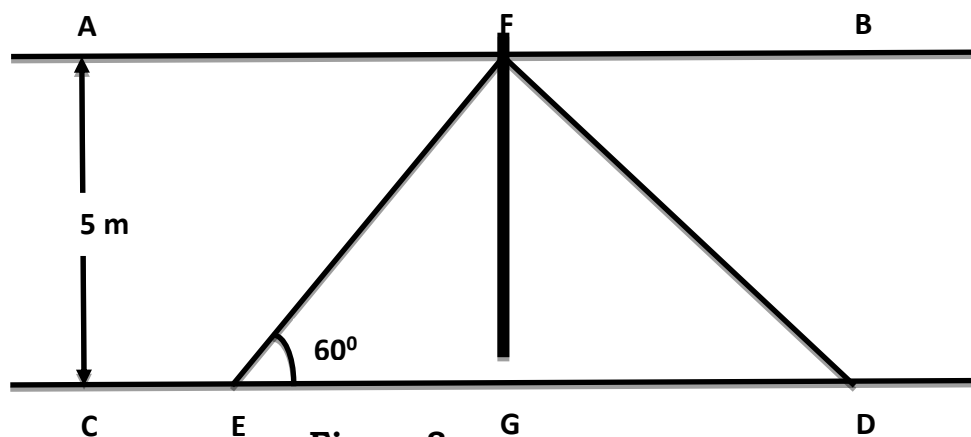


Figure 8

In **fig 8** above, AB and CD are parallel edges of a straight road 10m each and 5m apart. GF is a zebra crossing perpendicular to AB and CD. A traffic officer at point E which is 2m from C intends to cross straight to F then straight to D.

Task: As a student of mathematics with the knowledge on construction and bearing,

a) Assist the traffic officer to determine the distance he would save by moving straight from E to D instead of following the path he took **(13 scores)**

b) The bearing he turned from F to D. **(02scores)**

13.

1	2	8	3	5	7	6	4	5	3
7	6	4	2	6	6	1	8	4	9
10	3	5	6	5	2	7	5	3	6
4	5	7	8	2	9	4	7	6	4
5	6	3	8	6	5	4	9	5	6

Your mother who is a teacher of History comes home with scores of activity of integration of her S2 students as shown above. The head teacher of the school needs a report which shows how the learners performed in her subject whether Basic, Moderate or accomplished, guided by the grading below, (01-04) Basic, (05-07) Moderate and (08-10) Accomplished. The report should also include percentages for different performance levels as well as the mean

Task: Help your mother to prepare the report basing on the information above. **(15 Scores)**

End