

GLOBE EDUCATIONAL CONSULTANCY (GEC)–KAMPALA



P.7 MOCK EXAMINATION 2023

MATHEMATICS

Time Allowed: 2 hours 30 minutes

Name:

Stream:

School:

District Name:

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

1. This paper is made up of section A and B.
2. Section A has 20 short answer questions (40 marks).
3. Section B has 12 questions (60 marks).
4. All answers to both section A and B must be written in the spaces provided.
5. All answers must be written in blue ink and diagrams should be drawn in pencil.
6. Any handwriting that cannot easily be read will lead to loss of marks.
7. Unnecessary alteration of work may lead to loss of marks.
8. No calculators are allowed in the examination room.
9. Do not write anything in the boxes indicated: **"FOR EXAMINERS' USE ONLY"**.

FOR EXAMINERS' USE ONLY	
SECTION	MARKS
A (Qns 1 - 20)	
B (Qns 21 - 32)	
TOTAL	

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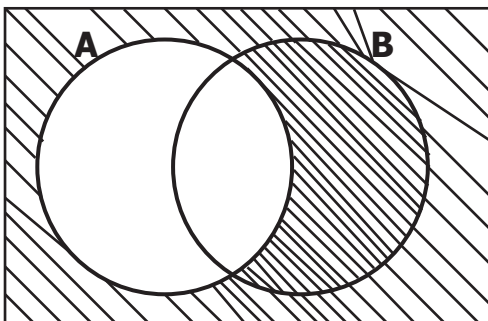
SECTION A (40 MARKS)

1. Work out: $15 \div 3$

2. Express the ratio 4:5 as a percentage.

3. An empty box weighs 3.08kg. 2 stones each of mass 14kg are placed in the box. Find the total mass of the box and its content.

4. Describe the shaded region on the Venn diagram.



5. Express 989 in Roman numerals.

6. Which whole number lies exactly midway between 3 and 99?

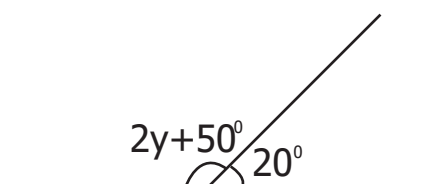
7. Work out: $-6 - +4$

8. Given that the exchange rate 1US dollar = Ugsh. 3740, find the cost of a watch in US dollars if James paid Ugsh. 187,000 for it.

9. Work out:	Years	Months
	5	10
	+ 3	9
	<hr/>	
	<hr/>	

10. The median of five consecutive even numbers is 8. Find their range.

11. Find the value of y in the figure below.



12. Simplify: $\frac{d^8 \times d^2}{d^6}$

13. Work out the least number of oranges that can be shared by either 6 or 8 girls and 3 oranges remain.

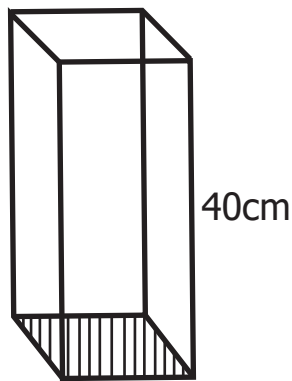
14. A car moving at 120km/h took only 45 minutes to cover a journey. Find the distance it covered in kilometres.

15. Set T has 63 proper subsets. Find $n(T)$.

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

17. There are thrice as many girls as boys in a class. If there are 80 pupils in the class, how many boys are there?

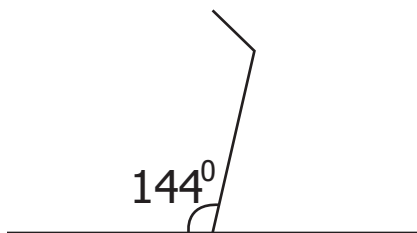
18. Given that the area of the shaded part in the figure below is 200cm^2 .



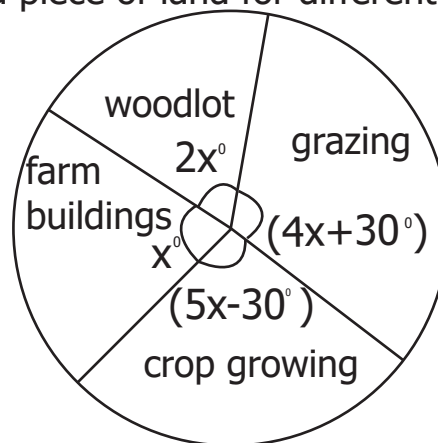
How many litres of water can the container hold?

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

20. The figure below shows one vertex of a regular polygon. Name the polygon.



21. The pie chart below shows how a farmer uses a piece of land for different activities.



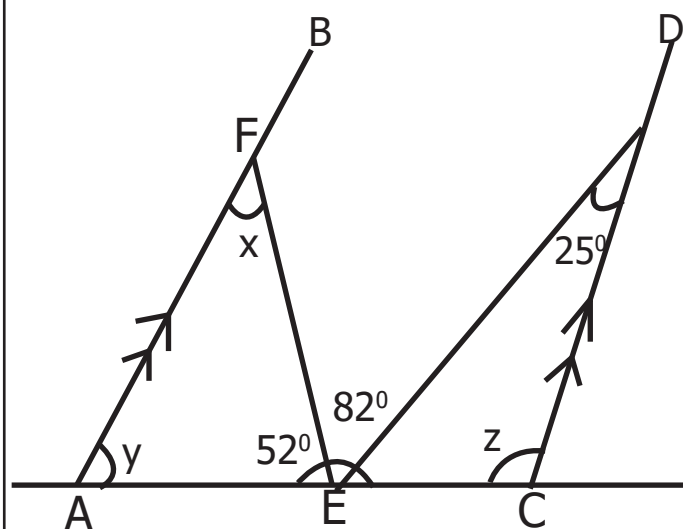
- a) Find the value of x . (2 marks)
- b) Given that a farmer used 5 acres for grazing the animals, how much land does he have? (2 marks)
- c) Express the angle sector for crop growing as a simplified ratio. (1 mark)

22. A cyclist left town P for town Q moving at 45km/hr for 2 hours to town Q. He rested for 30 mins at Q and continued to town R a distance of 45km moving at 30km/hr. After resting for 1 hour at R, he rode directly back to P taking 4 hours.

a) Find the distance from town P to town R. (2 marks)

b) Calculate the cyclist's average speed for the whole journey. (3 marks)

23. In the figure below, \overline{AB} is parallel to \overline{CD} . Study it carefully and answer the questions that follow:



a) Find the size of angles x , y and z . (6 marks)

24. a) Solve for y : $\frac{y-2}{6} > \frac{y+1}{4}$ (2 marks)

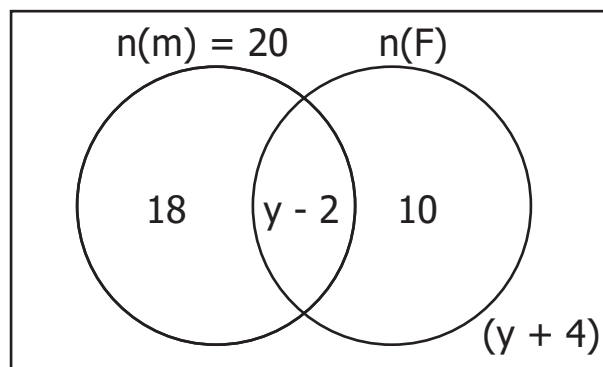
b) Given that $a = -4$, $b = 2$ and $c = -3$
Find that value of $\frac{ac}{b}$ (2 marks)

25) The Ministry of Education and sports distributed iron sheets to three schools D, E and F in the ratio 4:7:8 respectively. Given that both schools E and F received 300 iron sheet,

a) How many iron sheets did school D get? (3 marks)

b) If all the iron sheets for the three schools were in bundles of 4 iron sheets, how many bundles were distributed? (2 marks)

26. The Venn diagram below shows the number of guests who were served with either meat (M), fish (F) or both. Same guests ate none of the two.



a) Find the value of y . (2 marks)

b) How many guests never ate meat? (2 marks)

c) Find the probability that some guests ate none of the two. (1 mark)

27. a) Change 204_{five} to octal base. (3 marks)

b)	Simplify: $\frac{0.23 - 0.04 + 0.12}{0.8}$ (3 marks)
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a) Solve for n below. (2 marks)

$$34_n = 103_{\text{four}}$$

29. In a certain village, there are 10% more women than men but there are 30% less children than men.

a) Find the percentage of men in the village. (2 marks)

28. a) Round off 941.683 to one decimal place. (2 marks)

b) If there are 600 women in the village, how many children are there? (2 marks)

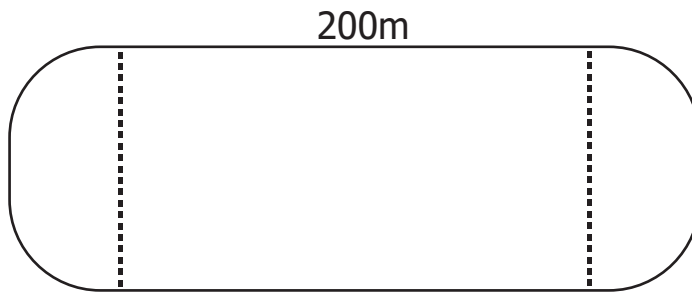
30. Town L is 60km North-East of town K and town M is 45km from town L on a bearing of 100° .

a) Draw a sketch diagram showing the three towns. (1 mark)

b) Using a scale of $1\text{cm} = 10\text{km}$, draw an accurate diagram showing the three towns. (3 marks)

c) From your accurate diagram, find the bearing of town K to town M. (1 mark)

31. Below is the parking area at a certain district headquarters.



If the distance around the parking is 466m, find the area it covers. (Use $\pi = \frac{22}{7}$) (5 marks)

32. Mrs. Mukulu bought the following items from a shop.

$2\frac{1}{4}$ kg of rice at sh. 4,000 each.

250g of sugar at sh. 6,000 per kg.

A 2kg bucket of Nomi for sh. 8000

2 bars of soap at sh. 7,000 each.

a) How much money did she spend altogether?

(4 marks)

b) If she received sh. 2,500 as change, how much money did she have at first? (1 mark)