BROAD EXAMINATIONS©

PRIMARY LEAVING SPECIAL EXAM

2023

MATHEMATICS

Time allowed: 2 hours 30 minutes.

Random No.						Personal No.		

Candidate's Name:.....

Candidate's Signature.....

School Name: .....

Read the following instructions carefully:

1. This paper is made up of two sections: **A** and **B**.
2. Section **A** has **20** questions (**40 Marks**).
3. Section **B** has **12** questions (**60 Marks**).
4. Answer **ALL** questions in both sections **A** and **B**.
5. All answers must be written in the space provided in blue or black ball point pens and ink. **Only diagrams should be done in pencil.**
6. Unnecessary crossing of answers will lead to loss of marks.
7. Any handwriting, which cannot be easily read, may lead to loss of marks.
8. Do **not** fill anything in the boxes indicated for Examiners' use only.

BROAD SPECIAL EXAM 2023

FOR EXAMINER'S USE ONLY	
QN.	MARKS SIGN
1-5	
6-10	
11-15	
16-20	
21-22	
23-24	
25-26	
27-28	
29-30	
31-32	
TOTAL	

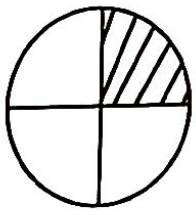
SECTION .A. (40 Marks)

1. Multiply;
$$\begin{array}{r} 2\ 0 \\ \times\ 5 \\ \hline \\ \hline \end{array}$$

2. Express XXVIII in Hindu-Arabic numerals.

3. Simplify $\dot{7} - \dot{4}$

4. Express the unshaded fraction as a percentage.

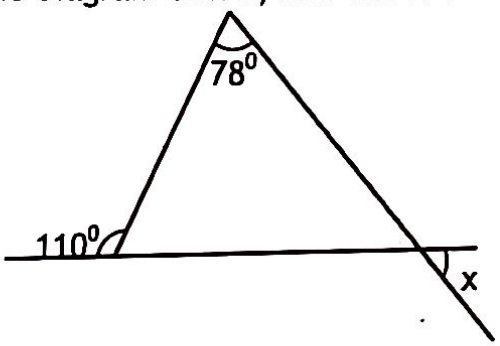


5. Given that p = (multiples of 7 less than 40), write down all elements in set P.

6. Solve; $y + 3 = 2y$

7. Work out; $1101_{two} - 110_{two}$

8. In the diagram below, find the size of angle x in degrees.

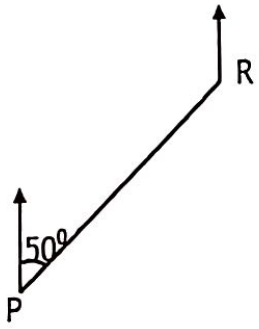


9. John walked for 1½hrs at an average speed of 40kilometres per hour. What distance did he cover?

10. What number when decreased by 25% becomes 450?

11. Julius has, in his pocket, a bundle of Ten thousand shilling notes numbered in order from AH565705 to AH565805. How many notes does he have in his pocket?

12. In the diagram below, find the bearing of town P from town R.



13. Peace is standing in a line so that her position keeps the same from either side of the line. If there are 37 girls in the line, find her position.

14. Seventy mangoes were put in boxes where some boxes had 11 mangoes in them and some had 12 mangoes in them. How many boxes had 12 mangoes in them?

15. Factorise completely $36a^2b - 9ab^2$.

16. Baby Alvin went to sleep at 2145hrs and woke up the next day at 0615hrs. For how long did Baby Alvin sleep?

17. Using a ruler, a pencil and a pair of compasses only, construct an angle of 120^0.

18. The Lowest Common Multiple of two numbers is 180 and their Greatest Common Factor is 4. If one of the numbers is 36, find the other number.

19. A trader put sh. 500,000/= in the bank for 1 year and the interest rate was 3% per month. How much money did he have at the end of the period?

20. Given that  represents 12 balls. Draw symbols to represent 28 balls.

SECTION .B. (60 Marks)

21. Out of 1200 pupils at Uganda Martyrs P/S who sat for a test, $\frac{1}{3}$ are girls.

(a) How many girls are in the school?

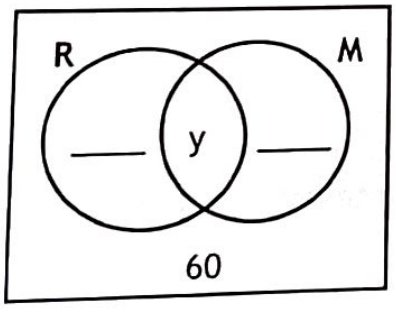
(02 Marks)

(b) If 40% of boys failed the test and 55% of girls passed the test, how many pupils altogether passed the test?

(04 Marks)

22. In a village party attended by 510 guests, 280 ate Rice (R), 290 ate matoke (M), y ate both Rice and Matoke while 60 guests ate none of the above foods.

(a) Use the information above to complete the venn diagram.



$\Sigma = 510$ (02 Marks)

(b) Find the value of y.

(02 Marks)

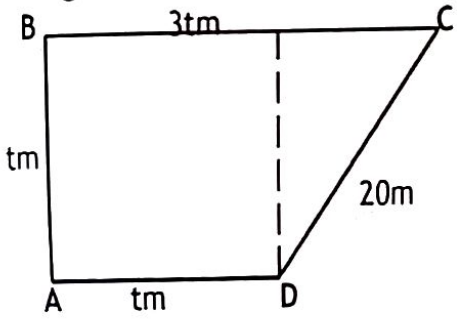
(c) Find the number of guests who ate only one type of food.

(01 Mark)

23. Kato is 38 years old now and his daughter is 12 years. After what time will Kato be twice as old as his daughter?

(04 Marks)

24. The diagram below has length BC = 3t, AD = AB = t and DC = 20m. If its area = $72m^2$,



(a) Find the value of t?

(03 Marks)

(b) Work out its perimeter.

(02 Marks)

25. In a class, the teacher had fruits. If these fruits are divided by 4 pupils, 2 remain, and when divided by 7, 3 remain, how many fruits had the teacher in class?

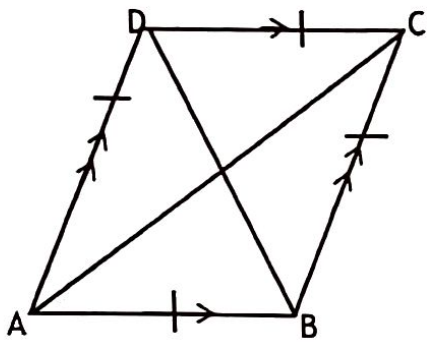
(04 Marks)

26. Complete the magic square below by filling in the missing values.

——	——	28	17
25	20	19	——
——	24	23	18
26	15	——	29

(05 Marks)

27. The diagonals of a rhombus below are in the ratio of 3:4. The area of a rhombus is $96cm^2$.



(a) Find the length of diagonal AC and BD.

(03 Marks)

(b) Work out the perimeter of the rhombus.

(02 Marks)

28. (a) Using a ruler, a pencil and a pair of compasses only, construct a triangle POT where line PO = 6.8cm angle POT = 45^0 and angle PTO = 75^0.

(04 Marks)

(c) Drop a perpendicular line from point T to meet line PO at point M and find the area of the triangle POT.

(02 Marks)

29. Peter wrote 4 consecutive even numbers on the chalkboard. The sum of the second and the fourth numbers is 16.
(a) List the numbers.

(03 Marks)

(b) Express the product of 1^{st} and 3^{rd} numbers in standard form.

(02 Marks)

30. A trader bought 20 pineapples at sh 1000 each. Some pineapples got spoilt and he then sold the remaining at sh. 1500 each. If he realized a profit of 20%, how many pineapples got spoilt?

31. Mr. Kashaija has the following money in different currencies. (04 Marks)

200 US dollars (US$)

1000 Kenya shillings (KShs)

5,000,000 Uganda shillings (UGX)

If the exchange rates today are as follows;

1 US$ = Ugsh. 3620

1 Kshs = Ugsh. 25

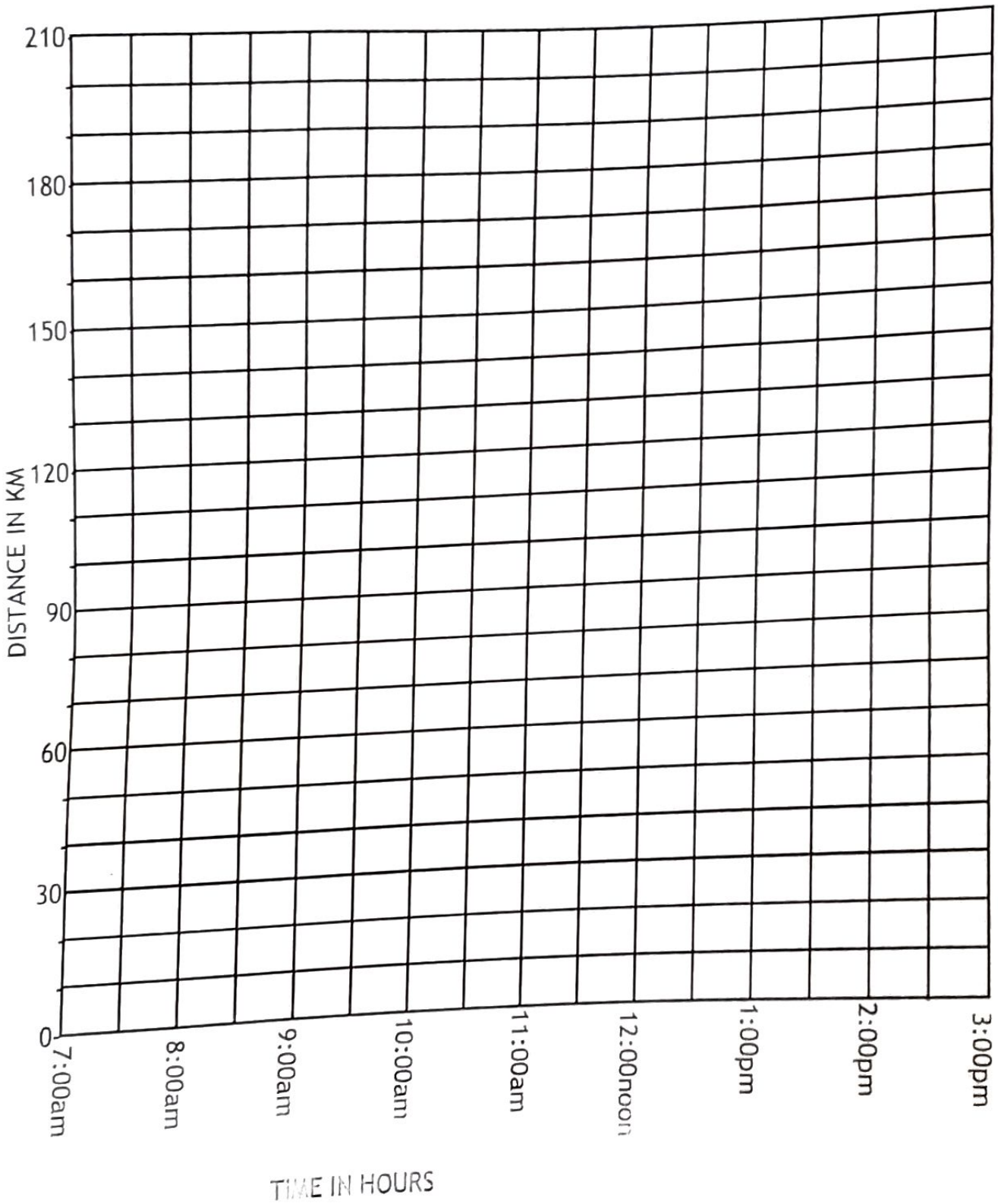
(a) How much in Uganda shillings does he have now?

(b) If a good watch in Kenya costs 463,360 Kenya shillings, how many dollars does he need to buy it? (03 Marks)

(03 Marks)

32. A motorist left town X at 7:30am for town Y at a speed of 60km/hr in 1 hour and 30 minutes. He rested at town Y for 30 minutes and continued to town Z which is 120km from Y in 1 hour. He rested for 30 minutes at town Z and drove back to town X at a speed of 60km/hr.

(a) Represent the above information on the grid below. (03 Marks)



(b) At what time did the motorist return to town X? (01 Mark)

(c) Calculate the average speed of the motorist for the whole journey while travelling.

(01 Mark)

END