BROAD EXAMINATIONS®

P.7 MATHEMATICS EXAMINATION

TRIAL SET I TERM I - 2023

Time allowed: 2 hours 30 minutes.

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.

FOR EXAMINER'S USE ONLY		
PAGES	MARKS	SIGN
Page 2		
Page 3		
Page 4		
Page 5		
Page 6		
Page 7		
Page 8		
TOTAL		

Teacher's comment to the learner

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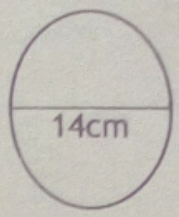
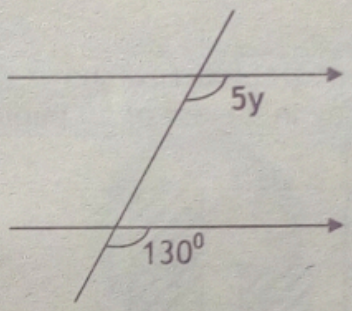
Approved by:

Team Head Mathematics Dept.

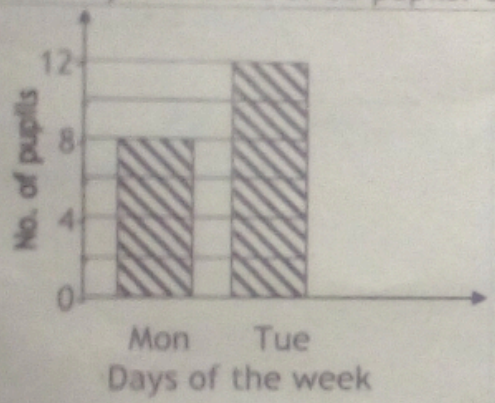
SECTION .A. (40 Marks)

1.	Write the place value of 3 in 2 3 4.	2.	Work out; 2 3 9 +5 4 8 _____
3.	Given that; K = {m, o, n, d, a, y}, L = {t, u, e, s, d, a, y} Find K ∩ L.	4.	Expand 2706 using exponents.
5.	Find the next number in the sequence 1, 3, 6, 10, 15, ___	6.	Which integer is 4 steps to the left of -1?
7.	Work out the area of a square garden whose side is 14m.	8.	Using a ruler, a pencil and a pair of compasses only, construct an angle of 90^0.
9.	Given that a = 3, b = -2 and c = 6, find the value of $\frac{ac}{b}$.	10.	In a line of girls, Barbra is the 7^{th} from either side. How many girls are in the line?
11.	Given that n(P) = 5. Find its number of subsets.	12.	A lorry covered 120km in 2½ hours. At what speed was it moving?

13.	Solve; $\frac{2m}{3} + 2 = 10$	14.	Find the circumference of the circle below. (Use $\pi = {}^{22}/_{7}$) 
15.	Work out; $\frac{5}{6} + \frac{2}{3}$	16.	Find the value of y in the diagram below. 
17.	Work out; $1\ 3\ 2_{five}$ $+1\ 2\ 2_{five}$ _____	18.	In a bus, there were 30% females and the rest were males. If there were 42 males, how many people were in the bus altogether?

19. A shopkeeper bought a crate of soda at sh. 19500 and later sold it at sh. 17500. Calculate the loss made.

20. The bar graph below shows the number of pupils who were absent on Monday and Tuesday in a class of 50 pupils. Use it to answer the questions that follow.



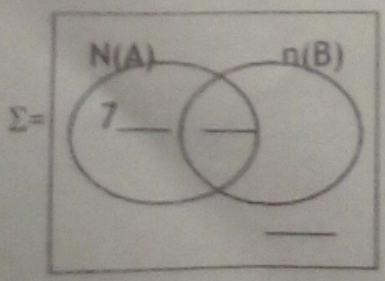
(a) On which day was the highest attendance recorded?

(b) How many pupils were present on Tuesday?

SECTION .B. (60 Marks)

21. Given that n(A) = 12, n(B only) = 8, n(A-B)= 7 while $n(A \cup B)' = 2$.

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



(b) Find n(Σ).

(5 marks)

22. Given the digits 4, 2, 3.

(a) Form all possible three digit numbers that can be formed.

(b) What is the probability of forming an even number?

(5 Marks)

23 (a) Show "a half past two" on the clockface below.

(b) What evening time is shown on the clockface below?

(4 marks)

24. Arrange 0.44, 0.4, 4.4 and 4.04 in descending order.

(5 marks)

25. Farouk is 7 years older than Lucky. If their total age is 31 years,

(a) How old is Farouk?

(b) How old was Lucky 5 years ago?

(5 marks)

26. (a) Using a ruler, a pencil and a pair of compasses only, construct triangle NTV where line NT = 7cm, TV = 8cm and line VN = 6.4cm.

(b) Measure angle NTV.

(5 marks)

27. The sum of 4 consecutive even numbers is 60.

(a) Find the numbers.

(b) Expand the largest number using place values.

(5 marks)

28. Study the shopping list and use it to answer the questions that follow.

2 cups at sh. 16000
5 plates at sh. 1500 each
6 forks at sh. 500 each
A saucepan at sh. 1200

(a) What is the cost of one cup?

(b) How much money does one pay for 5 plates, 6 forks and a saucepan?

(5 marks)

29. A company supplied text books to three schools M, N, P and in the ratio of 5:4:6 respectively. If the company supplied 540 text books altogether, how many textbooks did each school get?

(6 marks)

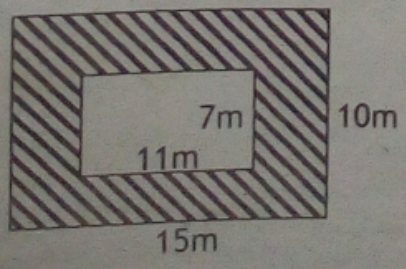
30. (a) Alice was facing in the West. She turned anti-clockwise to face North East. Through what angle did she turn?

(b) In which direction will one face if one turns through an angle of 225^0 from South East in a clockwise direction?

(4 marks)

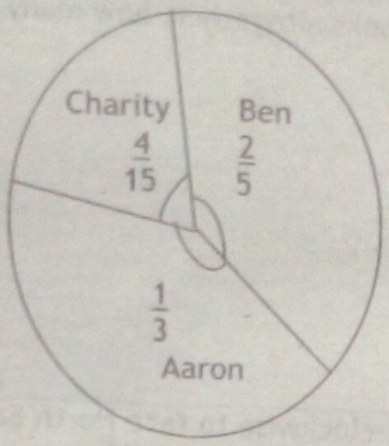
31. Study the figure below and use it to answer the questions that follow.

Work out the area of the shaded part.



(6 marks)

32. The pie-chart below shows how Mr. Charles shared sh. 30000 to his three children. Use it to answer the questions that follow.



(a) How much money did Aaron receive?

(b) How much more money did Ben receive than Charity?

(c) Express the amount of money received by Ben in degrees.

(5 marks)

END