BROAD EXAMINATIONS®
P.6 MATHEMATICS EXAMINATION
TRIAL SET I TERM I - 2023

Time allowed: 2 hours 30 minutes.

Pupil's Name:...

School Name: ....

District 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.
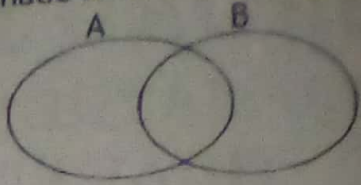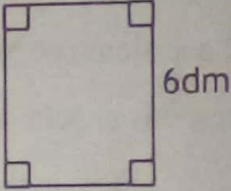
Teacher's comment to the learner

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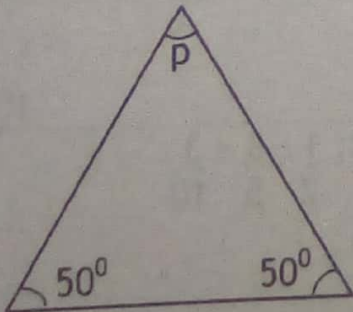...

Approved by:

Team Head Mathematics Dept.

1.	Work out; $\begin{array}{r} 4\ \ 3 \\ -1\ \ 0 \\ \hline \end{array}$	2.	Shade A∪B in the diagram below. A B
3.	Express 24 in roman numerals.	4.	Find the missing number. $\Box$ + 3 = 7
5.	Draw bundles to represent the number below. 19 =	6.	Find the area of the square below. 6dm
7.	Add; ⁻7 + ⁺5	8.	Find the next number in the sequence below. 14, 12, 10, 8, _____
9.	A trader bought an item at sh. 1500 and later sold it at sh. 2000. Find the profit made.	10.	What is the reciprocal of $\frac{3}{7}$?

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11.	Using a protractor, draw an angle of 65^0.	12.	What time is shown on the clock face below?
13.	Work out; 102_{five} $+ 13_{five}$ ‾‾‾‾‾	14.	Multiply; 143 $\times\ 5$ ‾‾‾‾‾
15.	Simplify; $0.24 + 1.8$	16.	Find the average of 7, 6, 8, 9 and 15.
17.	Set F= {factors of 12}, find n(F).	18.	A mathematical set costs sh. 4500. Find the cost of 9 similar Mathematical sets.
19.	In the diagram below, find the size of the angle marked P in degrees.	20.	What is the Lowest Common Multiple (LCM) of 18 and 24?

21. Study the Venn diagram below and answer questions that follow.

M   N

0   1   3   6
8   9   5
     7
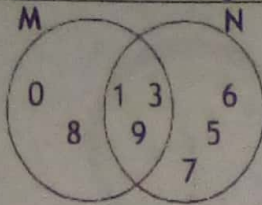
(a) List all the members of set N.

(b) How many members are there in M∪N?

(c) What is M-N?

(05 marks)

22. A woman went to the market and bought the following items.

2 pencils at sh. 400
A packet of match boxes at sh. 800
A face mask at sh. 2000

(a) How much money did she pay altogether?

(b) Find the average cost of each pencil.

(c) If she got a boda boda for sh. 2,000 to take her back home, how much money did she spend altogether?
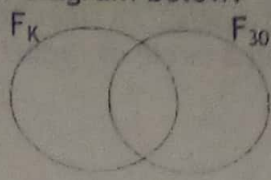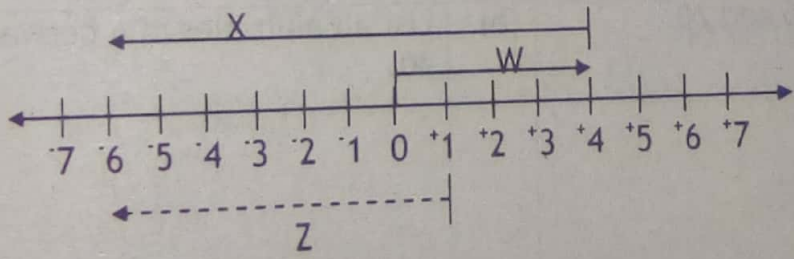
(06 marks)

23. (a) Add; $\dfrac{3}{4} + \dfrac{2}{3}$

(b) Work out; $\dfrac{1}{2} - \dfrac{3}{5} + \dfrac{3}{10}$

(05 marks)

24.	(a) Prime factorise 30 and give the answer in set notation form.	(b)	If $F_K = \{2_1, 2_2, 3_1, 3_2\}$, complete the Venn diagram below. F_K F_{30} (05 Marks)

25.	(a) Expand 235 using values.	(b)	What number is expanded to give; $(4 \times 10^2) + (8 \times 10^1) + (5 \times 10^0)$? (05 Marks)

26. Study the number line below and answer questions about it.

(a)	Write the integers represented by arrows; (i) W = (ii) X = (iii) Z =	(b)	What mathematical statement is shown on the above number line? (05 marks)

27.	(a) Using a pencil, a ruler and a pair of compasses only, construct an equilateral triangle in a circle of radius 3.5cm.

(b) Measure the length of its sides.

(04 marks)

28.	(a) Find the GCF of 16 and 20.	(b)	List all multiples of 6 between 10 and 40.

(c) Circle all factors of 20 in the number list below.

2, 7, 3, 4, 5
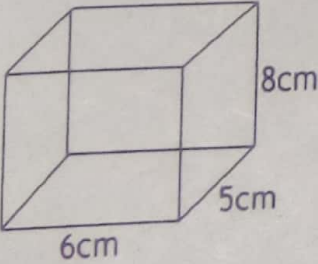
(05 marks)

29. In an extended family of 15 members, $^1/_5$ are females and the rest are males.

(a) What is the fraction of males?	(b) Find the number of females.

(c) How many more females than males are there in the family?

(05 marks)

30. Study the figure below and answer questions that follow.

8cm

5cm

6cm

(a) Find its number of;
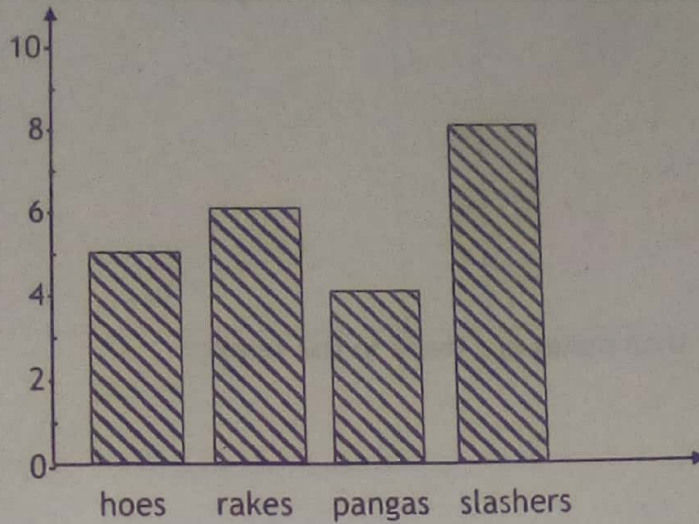(i) edges

(ii) faces

(iii) vertices

:) Calculate its volume.

(05 marks)

Work out the following;

$$\begin{array}{r} 1439 \\ +8487 \\ \hline \end{array}$$

(b) $9\overline{)3663}$

(04 marks)

32. The bar graph below shows the number of tools in a school store at Mwiri Junior School. Use it to answer questions that follow.

(a)	How many hoes are there in the school store?	(b)	Find the total number of tools in the school store.

(c) How many more slashers than rakes are there in the school store?

(06 marks)

END