



# BROAD EXAMINATIONS®

## P.7 MATHEMATICS EXAMINATION

### PRE - PLE TRIAL SET I 2024

Time allowed: 2 hours 30 minutes.

Random No.					Personal No.		

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.

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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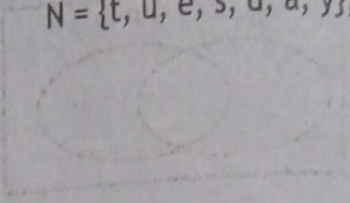
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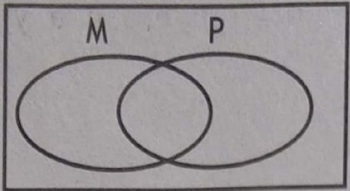

Approved by:

Team Head Mathematics Dept.

# SECTION .A. (40 Marks)

1. Add: $1 + 4$	2. Given that $M = \{m, o, n, d, a, y\}$ and $N = \{t, u, e, s, d, a, y\}$ , find $M \cup N$ . 
3. Convert 2.8m to centimetres.	4. Express 0.4 as a percentage of 2.
5. Find the next two numbers in the sequence below. 10, 14, 20, 28, 38, <u>          </u> , <u>          </u>	6. Circle acute angles in the list below. $24^\circ$ $94^\circ$ $180^\circ$ $52^\circ$
7. Simplify; $7 - +3$	8. Convert 10 m/s to km/h
9. Find the missing number. $12 \div \square = 3$	10. Write 0.00476 in standard form.



<p>11. Shade the complement of set M in the venn diagram below.</p> 	<p>12. Twelve men can dig a garden in 15 days. How many men can dig the same garden in 20 days working at the same rate?</p>
<p>13. Solve the inequality: <math>2 - 3x \geq 8</math></p>	<p>14. Write "Four hundred ninety six thousand thirteen" in figures.</p>
<p>15. A football match between Arsenal FC and Luton Town FC began at 11:15pm. At what time did the football match start in 24 hour clock system?</p>	<p>16.  represents 12 children. One day, 72 children were recorded for immunization against polio. Represent the number of children immunized using pictures.</p>
<p>17. Using a ruler, a pencil and a pair of compasses only, construct an angle of <math>135^\circ</math></p>	<p>18. Muwonge reported at the campus for an Engineering course in August. If the Engineering course takes 42 months, in which month of the year will he complete the course?</p>

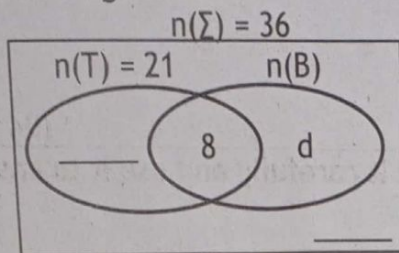


19. In a bundle of 100 shilling notes arranged consecutively, the last note is numbered AP0047601. Find the serial number of the first note.
20. A wheel of a bicycle has a radius of 28cm. If it makes 50 revolutions, what distance will it cover?

**SECTION. B. (60 MARKS)**

21. In a family of 36 people, 21 people like watching television (T),  $d$  people like playing board games (B) only, 8 people like both watching television and playing board games and  $2d$  people do not like any of the two games.

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

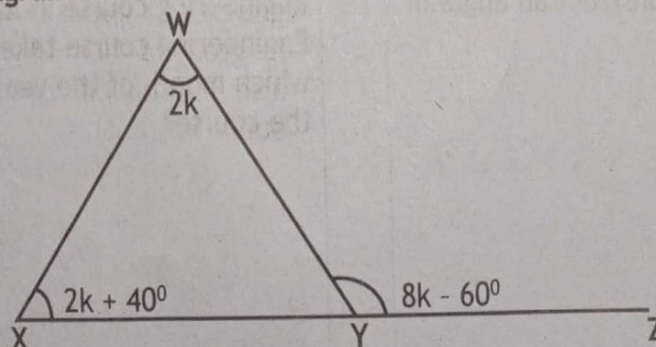


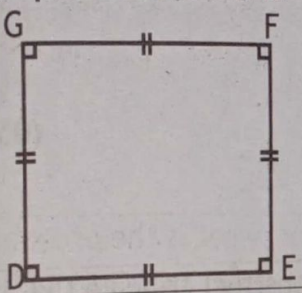
- (b) Find the value of  $d$ .

- (c) If a family member is picked at random to lead the prayer, what is the probability of picking a member who likes neither watching television nor playing board games?

**(06 Marks)**

22. Study the diagram below and use it to answer the questions about it.



(a) Find the value of $k$ in degrees.	(b) Find the size of angle $WYX$ .
23. (a) Add: $110_{\text{two}}$ + $11_{\text{two}}$ _____	(b) Convert $23_{\text{four}}$ to base two.
24. The perimeter of the square below is 52m. Study it carefully and use it to answer the questions about it.	
	
(a) Find the length of $EF$ .	(b) Find the area of the square.
25. (a) The prime factors of $M$ are $\{2_1, 2_2, 3_1, 5_1, 5_2\}$ . Find the value of $M$ .	(b) A teacher grouped pupils in a class discussion. When he grouped them in groups of 8 pupils, 3 remained and when he grouped them in groups of 12 pupils, also 3 remained. Find the least number of pupils in the class.



26.	<p>A cyclist started the journey at 9:00am and moved at a speed of 30km/h in <math>1\frac{1}{2}</math> hours. He rested for an hour and later continued to the destination covering the remaining 135km in 2 hours.</p>	
(a)	At what time did he reach the destination?	(b) Calculate the average speed for the whole journey.
27.	(a) Simplify; $1\frac{1}{2} - \frac{2}{3} \div \frac{1}{2} + \frac{1}{4}$	(b) Simplify; $\frac{4.8 \div 0.02}{0.97 + 1.43}$
28.	<p>(a) Using a ruler, a pencil and a pair of compasses only, construct triangle UBC where line UB = 6cm, BC = 7.5cm and UC = 5.6cm.</p> <p>(b) Measure angle UBC.</p>	

(06 Marks)

(05 Marks)

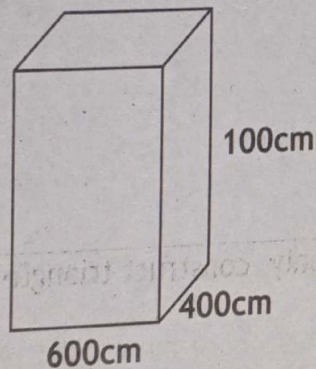
(05 Marks)

29. The bill table below shows the items bought by Martha on her birthday. Study and complete it correctly.

Item	Quantity	Unit Price	Amount
Meat	1½ kg	sh. 12000	sh. _____
Milk	2 litres	sh. _____	sh. 2400
Rice	_____ kg	sh. 2500	sh. _____
Salt	500g	sh. _____ per kg	sh. 750
Total expenditure			sh. 28650

(05 Marks)

30. The school tank below is completely full of water. Use it to answer questions about it.



- (a) Find the capacity of the above tank.

- (b) If the boarders use  $\frac{3}{4}$  of the water in the tank for washing, how many litres remain?

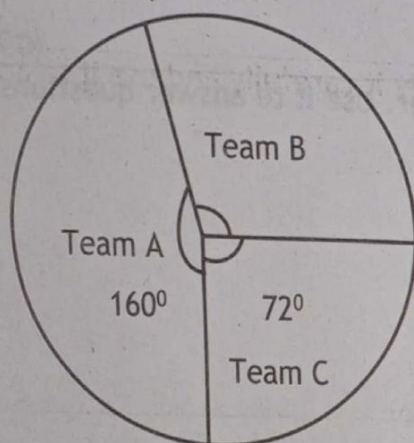
(05 Marks)



261. In a class,  $\frac{1}{5}$  of the pupils like Social Studies,  $\frac{2}{3}$  of the remainder like Mathematics,  $\frac{1}{5}$  like English and the rest like Science. If 21 pupils like Science, how many pupils are in the class altogether?

(05 Marks)

32. The pie-chart below represents how 3 teams shared money after participating in Easter Football competitions.



- (a) Find the sector angle for Team B.

- (b) If the 3 teams shared sh. 1,080,000, how much money did team A get?

- (c) How much more money did team A get than team B?

(06 Marks)

END