



BROAD EXAMINATIONS®

P.7 MATHEMATICS EXAMINATION

TRIAL SET II TERM II 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		




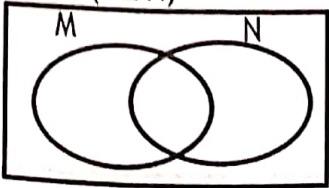
Teacher's comment to the learner

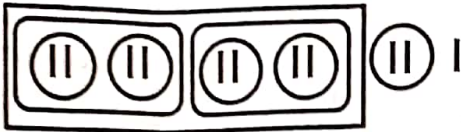
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Approved by:

Team Head Mathematics Dept.

SECTION .A. (40 MARKS)

1.	Divide: $12 \div 3$	2.	Given that set $K = \{m, o, d, e\}$ $L = \{d, o, m, e\}$ Set K is _____ to set L.
3.	Show "twenty minutes to 12" on the clockface below. 	4.	Write 24 in Roman numerals.
5.	Write the sum of the next numbers in the sequence below in words. 21, 23, 26, 31, 38, _____, _____	6.	Round off 36.296 to the nearest tenths.
7.	Given that  represents 6 apples and  represents 10 mangoes, draw pictures to represent 20 mangoes and 21 apples.	8.	A sailor turned anti-clockwise through an angle of 315° from West. Find the sailor's new direction.
9.	Simplify; $+4 - +9$	10.	Shade $(M \cap N)'$ 

11. The area of a rectangular compound is 100m^2 . If its width is $6\frac{1}{4}$ metres. Find the length of the compound.	12. A driver drove a distance of 72km in 2hours. At what speed in metres per second was the driver driving?
13. Write the base two number represented below. 	14. Find the value of p in; $4 + p = 7$
15. Work out the area of a circle whose radius is 20cm. (Take π as 3.14)	16. Using a ruler, a pencil and a pair of compasses only, construct an angle of 30° .
17. Jamada paid sh. 7500 for a shirt after being offered a discount of sh. 1500. Calculate his percentage discount.	18. Mark's age is a third of that of Peter. If their total age is 36 years, how old is Peter?

19.	A shop attendant sold a smart phone at sh.325,000 making a profit of sh.40,000. Calculate the cost price of the smart phone.	20.	Find the size of angle marked k in degrees.

SECTION .B. (60 MARKS)

21.	The diagrams below represents two tins of different capacities.		
		(a)	Which container holds less water?
(b)	How many millilitres of water can fill tin P completely?	(c)	If tin K is used to fill water in tin P, how many tins of size K can fill tin P?
			(05 Marks)
22.	(a) Given that $n(B)' = 36$, $n(B \text{ only}) = 12$ and $n(A) = 3p$, use the information to complete the venn diagram below.		
	<p style="text-align: center;">$\square =$</p>	(b)	Find the value of p.
(c)	Find $n(\Sigma)$.		
			(06 Marks)

23.	(a) Work out $3 + 5 = \underline{\hspace{2cm}}$ (finite 7)	(b)	If today is Monday, what day of the week will it be 9 days from now?
			(04 Marks)
24.	Compare the following using $<$, $>$ or $=$.		
	$\frac{2}{3} \quad \underline{\hspace{2cm}} \quad \frac{3}{5}$	$0.25 \quad \underline{\hspace{2cm}} \quad \frac{1}{4}$	$16\frac{1}{2}\% \quad \underline{\hspace{2cm}} \quad 0.4$
			(06 Marks)
25.	The interior angle of a regular polygon is 140° .		
(a)	Name the polygon.	(b)	Find its interior angle sum.
		(05 Marks)	
26.	Three companies W, X and Y were invited for a one day workshop about prevention of COVID-19 at a certain hotel. Companies sent 40 workers, 24 workers and 56 workers respectively. If a waiter organized equal number of chairs in different rooms to accommodate all the workers,		
(a)	find the number of chairs organized by the waiter in each room.	(b)	how many rooms did the workers of company W occupy?
			(04 Marks)

27. The table below represents the marks obtained by different pupils in a test.

Marks	65	80	75	95	50
No. of pupils	3	6	5	2	4

(a) Find the modal mark.

(b) Work out the range of the marks.

(c) How many pupils scored above the average mark?

(05 Marks)

28. Using a ruler, a pencil and a protractor, construct a square of side 4.5cm.

(04 Marks)

29. The table below shows how different currencies are bought and sold in a bank. Study and use it to answer the questions that follow.

Currency	Buy (Ugsh)	Sell (Ugsh)
US\$ 1	3650	3720
Ksh 1	24.8	25

(a) How much money in Uganda shillings can one get from 4000 Kenya shillings?

- (b) A trader exchanged 350 US dollars to Kenya shillings. How much money in Kenya shillings did he get from the bank?

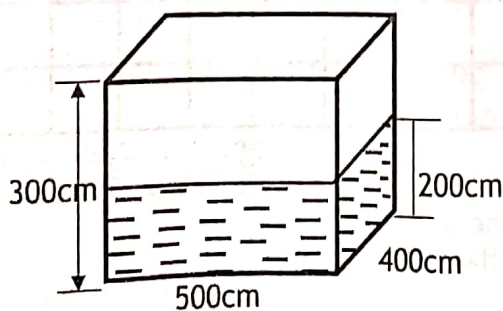
(05 Marks)

30. Two taps are connected to a water tank of 1000 litres. Tap N fills the tank in 4 hours while tap Q fills the tank in 2 hours. If they are opened at the same time,

- (a) how long can both taps take to fill the tank to full capacity? (b) how many litres of water can both taps fill in the tank in one hour?

(05 Marks)

31. The figure below shows a rectangular tank containing some water. Study it carefully and use it to answer the questions that follow.



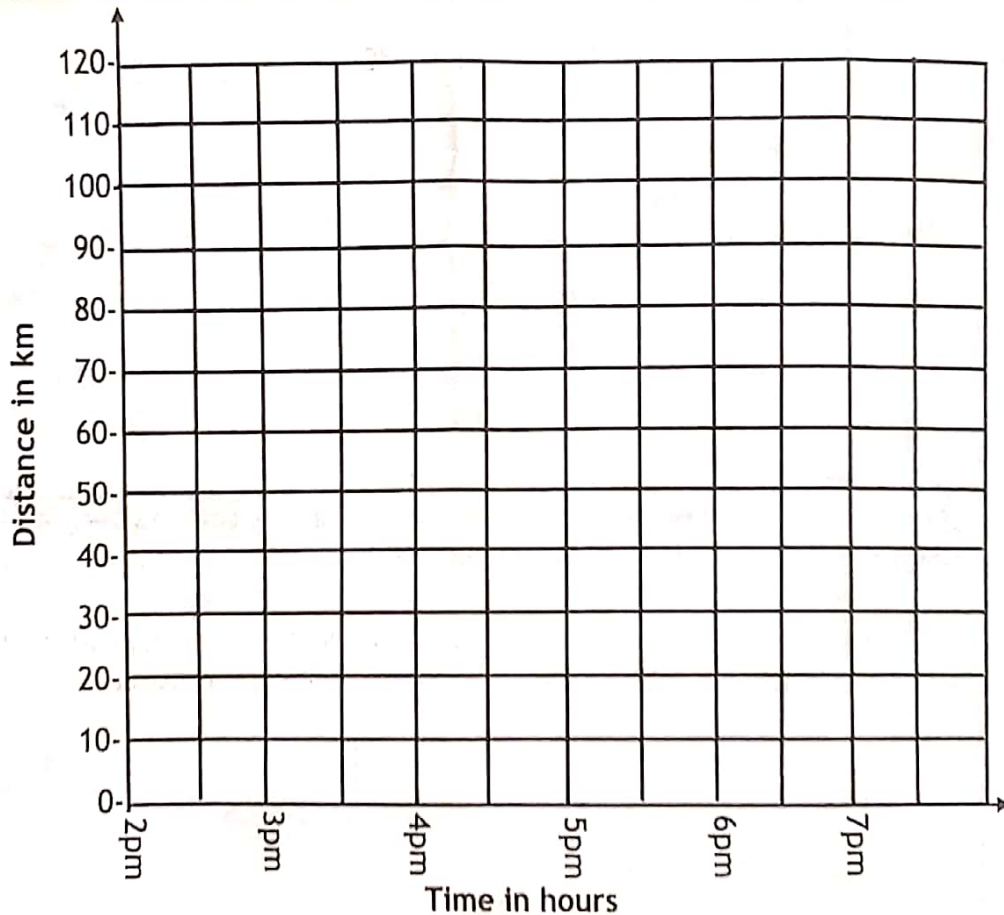
- (a) How many litres of water are in the tank?

- (b) If the water in the tank is poured into another rectangular tank whose base area is 160000cm^2 , find the new height of the water.

(05 Marks)

32. Town E and Town F are 120km apart. A lorry left town E at 2:00p.m. and covered 50km in $1\frac{1}{2}$ hours before breaking down. It stayed for 30 minutes while under repair and later continued to town F where it reached at 6pm.

(a) Use the above information to draw a graph showing the lorry's journey.



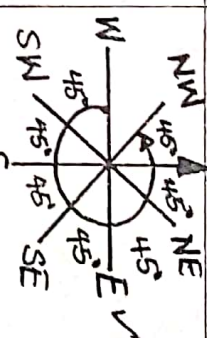

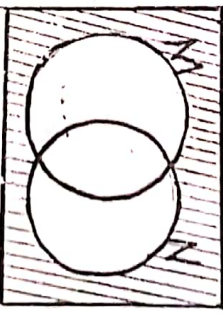
(b) Calculate the speed of the lorry after the repair.

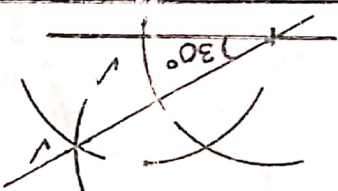
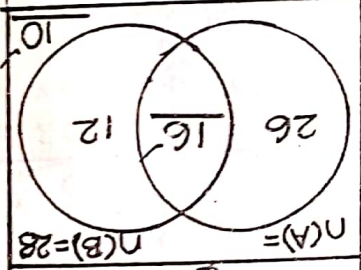
(06 marks)

END

BROAD EXAMINATIONS GUIDES

P.7 MATHEMATICS TRIAL SET II TERM II 2024

Qn.	Class	Solution	Marks	Comments	Qn.	Class	Solution	Marks	Comments
1	P2	$12 \div 3 = 4$ ✓✓	B ₂	for 4	8.	P5		B ₁	for the compass direction.
2	P3	equal ✓✓	B ₂	for equal	9.	P5	<p>north-west ✓</p> <p>$4 - (-9)$</p> <p>$4 - 9$ ✓</p> <p>-5 ✓</p>	M1 A1	for $4 - 9$ for -5
3	P4		B ₂	for correct hands	10	P6		B ₂	for the shaded part
4	P5	$24 = 20 + 4$ $24 = XX + IV$ ✓✓	B ₂	for XXIV	11	P5	<p>$L = \frac{A}{N}$</p> <p>$= 100 \div 6\frac{1}{4}$ ✓</p> <p>$= 100 \div \frac{25}{4}$</p> <p>$= 100 \times \frac{4}{25}$</p> <p>$= 40$ ✓</p> <p>$L = 16$ m ✓</p>	M1	for dividing
5	P5	$21, 23, 26, 31, 38, 49, 52$ ✓ $+2, +3, +5, +7, +11, +13$ $49 + 62 = 111$ ✓ One hundred eleven	B ₁	for one hundred eleven	12	P6	<p>$S = \frac{D}{T}$</p> <p>$= \frac{36000}{3600}$ m ✓</p> <p>$= 10$ m/s ✓</p>	M1 A1	for dividing for 10 m/s
6	P5	$36 \cdot 296$ ✓ $+ 0.1$ ✓ $36 \cdot 3$ ✓	M1 A1	for any method for answer	7	P4	<p>$\frac{20}{10} = 2$ ✓</p> <p>$\frac{24}{8} = 3$ ✓</p> <p>$\frac{36}{12} = 3$ ✓</p> <p>Apples: 3 pictures ✓</p> <p>Mangoes: 3 pictures ✓</p>	B ₁ B ₁	for 3½ pictures of apples for 2 pictures of mangoes

Qn.	Class	Solution	Marks	Comments
13	P7	1011 two ✓	B2	for answer
14	P5	$4-4+p = 7-4$ $p = 3$ ✓	M1	for method for 3
15	P6	$A = \pi r^2$ $= 3.14 \times 20 \times 20$ $= 314 \times 20 \times 20$ $= 125600$ ✓ $A = 125600$ ✓	M1	for substitution
			A1	for answer
16	P6		B1	for arcs
			B1	for well labelled angle of 30°
17	P7	$MP = CP + P$ $sh 7500$ $+ sh 1500$ $sh 9000$ ✓ $\% \text{ discount} = \frac{P}{MP} \times 100$ $= \frac{1500}{9000} \times 100$ $= 16\frac{2}{3}\%$ $= 16\frac{2}{3}\%$ $= 16\frac{2}{3}\%$	B1	for sh 9000
18	P6	Mark x 300 36 Total	B1	for 9
			B1	for 27
19	P5	$CP = SP - P$ $sh 325000$ $+ sh 40000$ $sh 365000$ ✓	A1	for adding
20	P6	$k+115 = 180$ ✓ $k+115-115 = 180-115$ $k = 65$ ✓	M1	for formation of equation
			A1	for 65
22	P6	(a)  $n(A) = 26$ $n(B) = 28$ $n(A \cap B) = 16$ $n(A) - n(A \cap B) = 26 - 16 = 10$	B1	for 16
			B1	for 10
			M1	for equation formed for 14
			A1	for adding
			A1	for 64
21	P4	(b) $TL = 1000 \text{ mL}$ $15L = (15 \times 1000) \text{ mL}$ $= 15000 \text{ mL}$ $15000 \text{ mL} - 1000 \text{ mL} = 14000 \text{ mL}$ $= 14 \text{ L}$ ✓	B1	for K
			M1	for multiplying
			A1	for 30
			A1	for dividing
			A1	for 30

Qn.	Class	Solution	Marks	Comments	Qn.	Class	Solution	Marks	Comments
29	P6	4000×25 Ug-sh 100,000	M1	for multiplying	31	P6	$C = \frac{500 \times 400 \times 200}{1000}$ $= 40000 \text{ litres}$	M1	for multiplying
(a)			A1	for answer	(a)			M1	for dividing
(b)		$\frac{350 \times 3720}{24.8}$	M1	for multiplying	(b)		$BA \times H = \frac{V}{250}$ $\frac{100000}{10000} H = \frac{40000 \times 1000}{10000}$ $H = 250 \text{ cm}$	M1	for dividing
		$1302000 \div \frac{248}{10}$ $\frac{5250}{1302000} \times \frac{10}{248}$	M1	for dividing				A1	for 250cm
		K-sh 52500	A1	for answer	32	P6			
30	P7	Tap N fills $\frac{1}{4}$, tap Q fills $\frac{1}{2}$ in one minute. $\frac{1}{4} + \frac{1}{2} = \frac{1+2}{4} = \frac{3}{4}$ ✓ Time taken $1 \div \frac{3}{4}$ ✓ $1 \times \frac{4}{3}$ $\frac{4}{3} = 1\frac{1}{3} \text{ hrs}$	M1	for $\frac{3}{4}$					
(b)		$1\frac{1}{3} \text{ hrs} \rightarrow 1000 \text{ L}$ $1 \text{ hr} \rightarrow 1000 \div 1\frac{1}{3}$ $= 1000 \div \frac{4}{3}$ $= \frac{1000 \times 3}{4}$ $= 750 \text{ litres}$	M1	for dividing					
			A1	for $1\frac{1}{3} \text{ hrs}$					
			M1	for dividing					
			A1	for 750 L.					