

# CENTENARY EDUCATIONAL CONSULT

## P.L.E PREPARATION - 2024



### PRIMARY SEVEN MATHEMATICS

Time Allowed: 2 hours 30 minutes

Index No:

Random No.						Personal No.		

Candidate's Name: .....

School Name: .....

School Emis No: .....

Candidate's Signature: .....


Read the following instructions carefully:

1. Section A has 20 questions (40 marks)
2. Section B has 12 question (60 marks)  
Attempt **ALL** questions.  
All answers to both sections **A** and **B**  
must be written in the spaces provided.
3. All answers **MUST** be written using **blue**  
or **black** ball – point pen or **ink**. Diagrams  
should be drawn in **pencil**.
4. Unnecessary **changes** of work may lead to  
loss of marks.
5. Any handwriting that cannot easily be read  
may lead to **loss** of marks.
6. Do not fill anything in the boxes indicated  
"For examiner's use only".

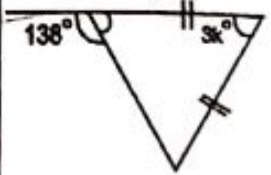

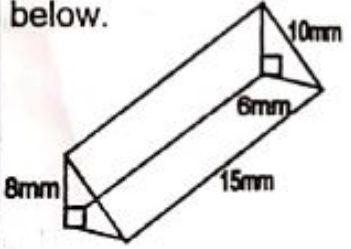

FOR EXAMINERS' USE ONLY		
Qn. No.	MARKS	EXR'S NO.
1 – 10		
11 – 20		
21 – 22		
23 – 24		
25 – 26		
27 – 28		
29 – 30		
31 – 32		
TOTAL		

Prepared by, Centenary Educational Consult (Kampala) Tel: 0700577551 / 0771954103  
Pre - PLE Trial Set II - 2024 Mathematics

**SECTION A: (40 Marks)**

1. Workout: $25 \times 4$	2. Write LXXIV in Hindu – Arabic numerals.
3. Given that set $k = \{\text{composite numbers less than } 10\}$ . Find number of subsets in set k.	4. Write 14,040 in words.
5. Express the morning time shown on the clock face below in 24 hour clock. 	6. Simplify: $^{-}3 + ^{-}5$
7. Harriet bought a hen and sold it at sh.18000 making a profit of sh.3000, find her percentage profit.	8. Round off 18,098 to the nearest thousands.
9. Workout: $\frac{8}{9} \div 1\frac{1}{3}$ using LCM.	10. Subtract $4x - 2y$ from $6x - 2y$ .

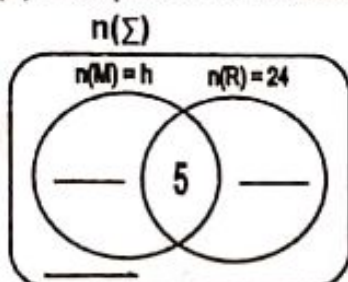


<p>11. In the figure below, find the value of <math>k</math> in degrees.</p> 	<p>12. Two men take 8 days to cultivate a piece of land. How many more men are needed to cultivate the land in two days.</p>
<p>13. Find the next two numbers in the sequence below.</p> <p>81, 27, 9, 3, _____, _____</p>	<p>14. If  represents 4 girls, draw pictures to represent 18 girls.</p>
<p>15. Work out the TSA of the figure below.</p> 	<p>16. Chemtai covered 400m in 20 seconds. What was her speed in km/h?</p>
<p>17. Write the base three numeral shown below.</p> 	<p>18. The bearing of Mbale from Bududa is <math>090^\circ</math>, what is the bearing of Bududa from Mbale?</p>

19.	Workout : $\frac{1.6 \times 0.6}{0.048}$	20.	Use distributive property to work out: $(235 \div 5) - (55 \div 5)$
-----	--	-----	---

**SECTION B (60 Marks)**

21. In a certain village, 24 farmers grow Rice (R), (h) farmers grow Maize (M) and 5 farmers grow both types of crops. If (h - 3) farmers grow other crops.  
 (a) Complete the venn diagram below using the above information. (3marks)



- (b) If 26 farmers did not grow Rice at all, how many farmers grow maize? (2marks)
- (c) How many farmers are in that village? (1mark)

22. (a) Solve for K:  $3^{2k} \div 1 = 81$  (2marks)  
 (b) Convert  $104_{\text{five}}$  to ternary base. (3marks)



23. The median of 4 consecutive even numbers is 26, if the last number is 2p.  
(a) Find the numbers. (3marks)

(b) Write the smallest number in standard form. (2marks)

24. Mummy went to the market with 2 notes of ten thousand shillings each and bought the items shown on the table below. After paying for all the items, she remained with sh.1,400. Complete the table. (5marks)

ITEMS	QUANTITY	UNIT COST	AMOUNT
Groundnuts	2½kg	Sh. _____	Sh.10,000
Millet	1750gms	Sh.3,000	Sh. _____
Salt	_____gms	Sh.1,400	Sh.350
Milk	2litres	Sh. _____	Sh. _____
TOTAL EXPENDITURE			Sh. _____

25. Mr. Omondi spent  $\frac{1}{4}$  of his salary on food,  $\frac{1}{5}$  on Rent and  $\frac{1}{3}$  of the remainder on fees. If he saves sh.165,000. Calculate his total salary. (5marks)

26. Using a ruler, a pair of compasses and a pencil only,  
(a) Construct triangle **BED** where line **BE = 7.5cm**, angle **EBD =  $60^\circ$**  and angle **EDB =  $75^\circ$**  (4marks)

(b) Measure line **ED**.

(1mark)

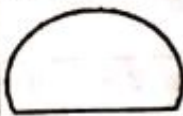
27. A motorist left Town **P** at **9:30a.m** driving at a speed of **40km/h** for **1¼hours** to Town **Q** where he rested for **30minutes**. He then continued to Town **R** distance of **70km** at a constant speed of **35km/h**.  
(a) Workout his average speed while travelling. (3marks)

(b) At what time did he reach Town **R**.

(2marks)



28. Below is a flower garden. Study it carefully and answer the questions that follow.



56m

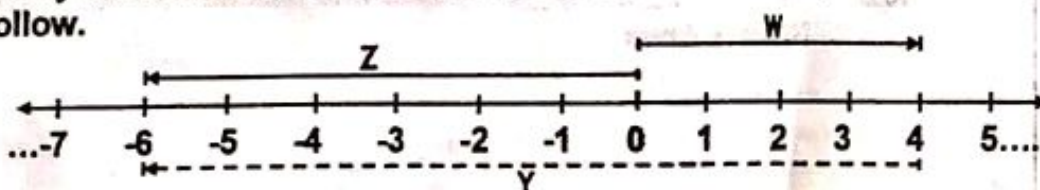
- (a) Calculate the amount of space occupied by the garden ( $\pi = \frac{22}{7}$ ) (3marks)

- (b) If a farmer fenced the flower garden using poles placed at intervals of 6m apart, how much did he spend on all the poles used at a cost of 1500 per pole? (3marks)

29. The interior and exterior angles of a regular polygon are in the ratio of 3:1 respectively.

- (a) Find the size of each interior angle. (2marks) (b) Name the polygon. (2marks)

30. Study the numberline below and use it to answer the questions that follow.



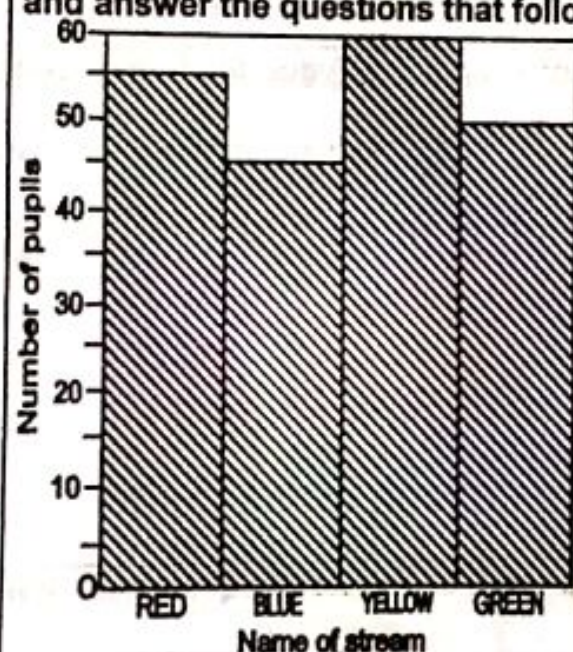
- (i) Write the integers represented by letters. (1mark each)

W = \_\_\_\_\_ Y = \_\_\_\_\_ Z = \_\_\_\_\_

(ii) What is the mathematical statement shown above? (1mark)

31. A mother is 19 years older than her Daughter. In 8 years time, the mother will be twice as old as her Daughter.  
 (a) How old is the mother? (3marks) (b) What was the age of the daughter 6 years ago? (2marks)

32. The Histogram below shows the number of pupils who sat for End of Term Exams in a P.6 class with 60 pupils per stream. Study it carefully and answer the questions that follow.



(a) In which stream did the highest number of pupils miss exams? (1mark)

(b) How many pupils sat for Exams in stream Red? (1mark)

(c) Calculate the average number of pupils who missed Exams. (2marks)

THE END



**CENTENARY EDUCATIONAL CONSULT.**  
**P.7 MATHS P.L.E PREPARATION II MARKING GUIDE - 2024**

P.7 MATHS P.L.E PREPARATION II SECTION A (40 Marks)																									
SOLUTION		MARKS	SOLUTION		MARKS																				
1.	$\begin{array}{r} 25 \\ \times 4 \\ \hline 100 \end{array}$	2marks	2. LXX = 70 I IV = + 4 LXXIV = 74		2marks																				
3. $h = \{4, 6, 8, 9\}$ $n(h) = 4$ No of subsets = $2^n$ $= 2 \times 2 \times 2 \times 2$ $= 4 \times 4 = 16$ subsets		2marks	4. 14000 = Fourteen thousand + 40 = Forty 14,040 = Fourteen Thousand Forty		2marks																				
5. 12:30a.m = 12:30a.m - 12:00 hours 00:30 hours 12:30p.m = 00:30hours		2marks	6. $3 + (8)$ $= 3 + 8$ $= 11$ <table><tr><td>+</td><td>-</td><td>+</td><td>-</td></tr><tr><td>+</td><td>-</td><td>+</td><td>-</td></tr><tr><td>+</td><td>-</td><td>+</td><td>-</td></tr><tr><td>+</td><td>-</td><td>+</td><td>-</td></tr><tr><td>+</td><td>-</td><td>+</td><td>-</td></tr></table> None	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-		2marks
+	-	+	-																						
+	-	+	-																						
+	-	+	-																						
+	-	+	-																						
+	-	+	-																						
7. B.P = S.P - P = sh. 18000 - sh.3000 sh.15000 $\% \text{profit} = \left( \frac{p \times 100}{B.P} \right) = \left( \frac{3000 \times 100}{15000} \right)$ $= 20\%$		2marks	8. <table><tr><td>T</td><td>H</td><td>T</td><td>H</td><td>O</td></tr><tr><td>1</td><td>8</td><td>0</td><td>9</td><td>8</td></tr></table> $\begin{array}{r} 18000 \\ + 0000 \\ \hline 18000 \end{array}$ 18,098 $\neq$ 18000	T	H	T	H	O	1	8	0	9	8		2marks										
T	H	T	H	O																					
1	8	0	9	8																					
9. $\frac{8}{9} + \frac{1}{3} = \left( \frac{8 \times 1}{9 \times 1} \right) + \left( \frac{1 \times 3}{3 \times 3} \right) = \frac{8}{9} + \frac{1}{3} = \frac{11}{9}$ $\frac{8}{9} + \frac{1}{3} = \text{LCM} = 9$		2marks	10. $= (6x - 2y) - (4x - 2y)$ $= 6x - 2y - 4x + 2y$ $= 6x - 4x + 2y - 2y$ $= 2x$		2marks																				
11. Value of k $42^\circ + 42^\circ + 3k = 180^\circ$ $84^\circ + 3k = 180^\circ$ $84^\circ + 3k = 180^\circ - 84^\circ$ $3k = 96^\circ$ $k = 32^\circ$ 		2marks	12. Men Days More men Days 2 men = 8 days 1 man = (8 x 2) days = 16 days = 16 days 2days = $\left( \frac{16}{2} \right)$ $= 8$ men $= (8 - 2) \text{ men}$ 3 day = 2 men 1 day = $\left( \frac{2 \times 8}{3} \right)$ men 2 days = $\left( \frac{16}{3} \right)$ men $= 5$ men		2marks																				
13.		2marks	14. 4 girls = 1 picto 1 girl = $\left( \frac{1}{4} \right)$ picto 18 girls = $\left( \frac{1 \times 18}{4} \right) = 4 \frac{1}{2}$ picto 		2marks																				
15. T.E.A = $2 \left( \frac{1}{2}bh + LCS + S_1 + S_2 \right)$ $\frac{1}{2} \times 1 \times 5mm \times 10mm + 15mm (8+8+10)mm$ $= 60mm^2 + 15 \times 24mm^2$ $= 60mm^2 + 360mm^2$ $= 420mm^2$		2marks	16. Distance in km Time in hours Distance in km/hr 1km = 1000m 3600secs = 1hr 1m = $\frac{1}{1000}$ km 1sec = $\left( \frac{1}{3600} \right)$ hr 400m = $\left( \frac{400}{1000} \right)$ km 20 secs = $\left( \frac{20}{3600} \right)$ hr $D = \frac{4}{10}$ km $= (36 \times 2) \text{ km/hr}$ $= 72 \text{ km/hr}$		2marks																				
17. 1 group of three threes 0 threes and 2 ones = 102		2marks	18. $= 180^\circ$ The bearing of Bududa from + 090° Nibale is 270° $\underline{270^\circ}$		2marks																				
19. $\frac{16 \times 6 + 48}{10 \times 10 \times 1000}$ $= \frac{16 \times 6 + 48}{10 \times 10 \times 1000} = 20$		2marks	20. $(238 - 83) + 8$ $= 155 + 8$ $= 163$ $\frac{163}{3} = 36$		2marks																				
SECTION B (60 Marks)																									
21. (a) $n(M) = h - 5$ $n(R) = 19$ $n(M \cap R) = 5$ $n(R) \text{ only} = 19 - 5 = 14$ $n(M) \text{ only} = h - 5 - 5 = h - 10$ $n(M \cup R) = h - 10 + 14 + 5 = h + 9$	(b) Value of h $h - 5 + h - 3 = 26$ $h + h - 3 - 5 = 26$ $2h - 8 = 26$ $2h - 8 + 8 = 26 + 8$ $2h = 34$ $h = 17$	Grow maize $= (h - 5) + 5$ $= (17 - 5) + 5$ $= 12 + 5$ $= 17$ farmers	(c) $n(\overline{M})$ $= (h - 5) + 5 + 19 + (h - 3)$ $= (17 - 5) + 5 + 19 + (17 - 3)$ $= (12 + 24 + 14)$ farmers $= 50$ farmers		3marks 1mark																				
22. (a) $3^m + 1 = 81$ $3^m + 3^0 = 81$ Factorize 81 using 3. $3^{m-0} = 81$ $2h - 0 = 4$ $2h = 4$ $h = 2$	(b) $104_{10}$ $104_{10} = (1 \times 5^2) + (4 \times 5^1)$ $= (1 \times 5 \times 5) + (4 \times 1)$ $= 25 + 4$ $= 29$ 29 to base 3	<table><tr><td>5</td><td>NO</td><td>REM</td></tr><tr><td>3</td><td>29</td><td>2</td></tr><tr><td>3</td><td>9</td><td>0</td></tr><tr><td>3</td><td>3</td><td>0</td></tr><tr><td>3</td><td>1</td><td>1</td></tr></table> $= 1002_{10}$ $104_{10} = 1002_{10}$	5	NO	REM	3	29	2	3	9	0	3	3	0	3	1	1			2marks 3marks					
5	NO	REM																							
3	29	2																							
3	9	0																							
3	3	0																							
3	1	1																							

