



THE PRIME EXAMINATIONS 2024

P.5 END OF TERM I
MATHEMATICS

Time allocated 2 hours 30 minutes



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Suggest Marking
guide.

READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. This paper has two sections: A and B. Section A has 20 questions (40 Marks) and Section B has 12 questions. (60 Marks)
2. Answer ALL questions. All the working for both sections A and B must be shown in the spaces provided.
3. All working must be done using a blue or black ball point pen or ink. Any work done in pencil other than on graphs and diagrams will not be marked.
4. No calculators are allowed in the examination room.
5. Unnecessary changes in your work and handwriting that cannot be read easily may lead to loss of marks.
6. Do not fill anything in the table indicated

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QUESTION NUMBER	MARKS ATTAINED	INITIALS
1 - 5		
6 - 10		
11 - 15		
16 - 20		
21 - 22		
23 - 24		
25 - 26		
27 - 28		
29 - 30		
31 - 32		
TOTAL		

APPROVED

[Signature]
Consultant

Mathematics Department (PEC)

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Section A (40 Marks)

1 Multiply: 13×2

$$\begin{array}{r} 13 \\ \times 2 \\ \hline 26 \end{array}$$

1	3	X
0	2	6
2	6	2

$\therefore 13 \times 2 = 26$

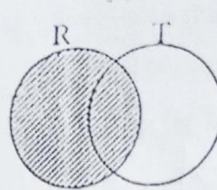
2 Change 50 to roman numerals.
 $50 = L$

3 Subtract: $430_{\text{five}} - 21_{\text{five}}$

$$\begin{array}{r} 25 \\ 430_{\text{five}} \\ - 21_{\text{five}} \\ \hline 404_{\text{five}} \end{array}$$

$0+5=5$
 $5-1=4$
 $2-2=0$
 $4-0=4$

4 Describe the un-shaded region in the Venn diagram below.



Set T only
or
 $T - R$
or
 R'

5 Find the LCM of 18 and 9.
order: 2, 3, 5, 7, 11, 13, ...

2	18	9
3	9	9
3	3	3
1	1	1

LCM = $2 \times 3 \times 3 = 18$

6 Change 42 days to weeks.
 $7 \text{ days} = 1 \text{ week}$
 $42 \text{ days} = \frac{42}{7} \times 1 \text{ week}$
 $= 6 \times 1 \text{ week}$
 $= 6 \text{ weeks}$

7 Work out: $-7 + 8$



$$\begin{array}{r} -7 + 8 \rightarrow + \times + = + \\ +8 + -7 \rightarrow + \times - = - \\ +8 - 7 \\ = +1 \end{array}$$

8 Round off 385 to the nearest tens.
 385
5 is nearer to 10 than to 0
So, add 10 to the value of the required place value.
 380
 390
 $\therefore 385 \approx 390$

9 Kipsiro ran a distance of 5600 meters in ten minutes. Write the distance he covered in km.
 $1000 \text{ m} = 1 \text{ km}$
 $5600 \text{ m} = \frac{5600}{1000} \times 1 \text{ km}$
 $= 5.6 \text{ km}$

10 Use a symbol to describe the set below. Set T contains cows with legs each.

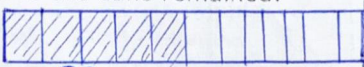
$T \neq \emptyset$

11 Given that  represents 8 chairs, how many chairs are represented by ?

$8 + 8 + 8 + 8 + 8$
 $= 24 + 16$
 $= 40 \text{ chairs}$

or
 $1 \text{ chair} \rightarrow 8 \text{ chairs}$
 $5 \text{ chairs} \rightarrow (5 \times 8) \text{ chairs}$
 $= 40 \text{ chairs}$

12 Odongo ate $\frac{5}{12}$ of the cake, what fraction of the cake remained?

$\frac{5}{12} =$ 

OR

$1 - \frac{5}{12} = \frac{12-5}{12} = \frac{7}{12}$

$\frac{7}{12}$ of the cake remained

13 Prime factorize 24 and write factors in subscript form.

order: 2, 3, 5, 7, 11, 13, ...

24

$2 \wedge 12$

$2 \wedge 6$

$2 \wedge 3$

$3 \wedge 1$

$= \{2, 2, 2, 3, 3\}$

14 Find the next numbers in the sequence.

3, 7, 11, 15, 19, 23, 29

$\checkmark +4 +4 +4 +4 +4$

$19 + 4 = 23$ $23 + 4 = 27$

15 Given that set A = {even numbers less than 10}, find the number of elements in set A.

$A = \{0, 2, 4, 6, 8\}$

$n(A) = 5$

16 Tell the morning time shown on a clock face below.



5:55 a.m

or
It is 5 minutes to 6 of the clock in the morning

17 The District Education Officer distributed 2084 text books to four schools. How many text books did each school get?

$$\begin{array}{r} 521 \\ 2084 \\ \hline 4 \end{array}$$

= 521 text book

\therefore Each school got 521 text books

$$\begin{array}{r} 0521 \\ 42084 \\ \hline 20 \\ 20 \\ \hline 008 \\ 8 \\ \hline 04 \\ -4 \\ \hline \end{array}$$

$$\begin{array}{r|l} \times & 4 \\ \hline 1 & 4 \\ 2 & 8 \\ 3 & 12 \\ 4 & 16 \\ 5 & 20 \\ 6 & 24 \\ 7 & 28 \end{array}$$

18 Write the number expanded to give $(7 \times 1000) + (5 \times 100) + (4 \times 1)$.

$$\begin{array}{r} 7000 + 500 + 4 \\ 7000 \\ + 500 \\ 4 \\ \hline 7504 \end{array}$$

19 Find the square of 6.

$$\begin{aligned} &= 6^2 \\ &= 6 \times 6 \\ &= 36 \end{aligned}$$

20 4 pens cost sh. 4,000. Find the cost of 3 similar pens.

4 pens cost sh. 4000

1 pen costs sh. $\frac{4000}{4} = 1000$

omitted sh. 100

4 pens cost sh. 4000

1 pen costs sh. 4000

3 pens will cost sh. $\frac{4000}{4} \times 3 = 3000$

Section B (60 Marks)

21 (a) Convert 3hrs to minutes.

(02 marks)

$$\begin{aligned} 1 \text{ hr} &= 60 \text{ min} \\ 3 \text{ hrs} &= 3 \times 60 \text{ min} \\ &= 180 \text{ min} \end{aligned}$$

(b) Work out: Hrs mins

(02 marks)

$$\begin{array}{r} 70 \\ +4 \\ \hline 12 \end{array} \quad \begin{array}{r} 30 \\ 50 \\ \hline 20 \end{array}$$

$$\begin{aligned} 30 + 50 &= 80 \\ 80 \div 60 &= 1 \text{ rem } 20 \\ 1 + 7 + 4 &= 12 \end{aligned}$$

(c) Work out: Hrs mins

(02 marks)

$$\begin{array}{r} 8 \\ -4 \\ \hline 4 \end{array} \quad \begin{array}{r} 50 \\ 30 \\ \hline 20 \end{array}$$

$$\begin{aligned} 50 - 30 &= 20 \\ 8 - 4 &= 4 \end{aligned}$$

22 Fill missing number.

(a) $\boxed{112} \div 4 = 28$

(02 marks)

$$\begin{array}{r} \square \times 4 = 28 \times 4 \\ \square = 112 \end{array}$$

(b) $3 \times \boxed{11} = 33$

(02 marks)

$$\begin{array}{r} 30 = 33 \div 3 \\ \square = 11 \end{array}$$

(c) $\boxed{12} \times 5 = 60$

(02 marks)

$$\begin{array}{r} 50 = 60 \div 5 \\ \square = 12 \end{array}$$

23 (a) Write 1304 in words.

(01 mark)

Ths	Units
1	304
One thousand	three hundred four

$\therefore 1304 \rightarrow$ One thousand three hundred four

(b) Given the numeral 56952, find the sum of the value of 5 in the numeral

(02 marks)

above.
T H T H T O
5 6 9 5 2

$$\begin{aligned} 5 \times 10 &= 50 \\ 5 \times 10,000 &= 50,000 \end{aligned}$$

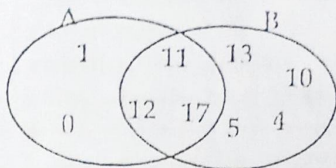
Sum

$$\begin{array}{r} 50,000 \\ + 50 \\ \hline \end{array}$$

$$50,050$$

24

Study the Venn diagram below and answer questions that follow.



(01 mark)

(a) List down all the elements of set A.

$$A = \{1, 0, 11, 12, 17\}$$

(01 mark)

(b) List down all the elements of set B.

$$B = \{11, 12, 17, 13, 10, 5, 4\}$$

(02 marks)

(c) Find $n(A \cup B)$

$$A \cup B = \{1, 0, 11, 12, 17, 13, 5, 4, 10\}$$

$$n(A \cup B) = 9$$

(02 marks)

(d) Find $n(B - A)$

$$B - A = \{13, 10, 4, 5\}$$

$$n(B - A) = 4$$

25

(a) Work out: $\frac{11}{17} - \frac{15}{17}$

(02 marks)

$$= \frac{11-15}{17}$$

$$= -\frac{4}{17}$$

(02 marks)

(b) Work out: $\frac{5}{6}$ of 36 sweets.

$$\frac{5}{6} \times 36 \text{ sweets}$$

$$(36 \div 6) \times 5 \text{ sweets}$$

$$6 \times 5 \text{ sweets}$$

$$30 \text{ sweets}$$

26. Below is the shopping list.

a kg of sugar at sh 4500
a kg of rice at sh 3500
a litre of milk at sh 2000

(a) Find the total cost of 3 kg of sugar.

$$\begin{array}{r} \text{sh. } 4500 \\ \times 3 \\ \hline \end{array}$$

$$\text{sh. } 13500$$

OR

(02 marks)

sh.	4	5	0	0	X	
①	1	2	5	0	0	3
	3	5	0	0		

$\therefore 3 \text{ kg} = \text{sh. } 13500$

(b) Find the total cost of 2 kg of rice and $1\frac{1}{2}$ litre of milk. (03 marks)

$$\text{Rice} = 2 \times \text{sh. } 3500 = \text{sh. } 7000$$

$$\begin{array}{r} \text{Milk} = 1\frac{1}{2} \times 2000 = \text{sh. } 3000 \\ 3 \times 2000 \\ \hline \text{sh. } 3000 \end{array}$$

$$\text{sh. } 10000$$

27. Given the digit 7, 1, 6

(a) Write the largest numeral formed using the above digits.

(01 mark)

761

(b) Write the smallest numeral formed using the above digits.

(01 mark)

167

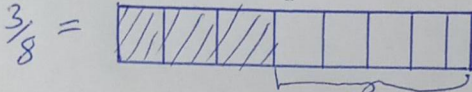
(c) Find the sum of the largest and the smallest numerals formed.

(02 marks)

$$\begin{array}{r} 761 \\ + 167 \\ \hline 928 \end{array}$$

28 In a class of 48 pupils, $\frac{3}{8}$ are boys and the rest are girls.

(a) Find the fraction of girls.



$\frac{5}{8}$ of them pupils are girls.

OR $1 - \frac{3}{8} = \frac{8}{8} - \frac{3}{8}$

$\frac{8-3}{8} = \frac{5}{8}$ of them are girls

(b) How many more girls than the boys are in the class?

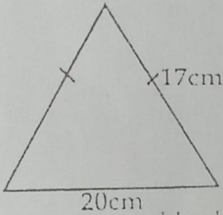
BOYS
 $3 \times 48 = 6$
 $3 \times 16 = 18$ boys

GIRLS
 $48 - 18 = 30$ girls

$2 \times 10 = 20$
 $30 - 20 = 10$ more girls than boys

(03 marks)
OR
 $\frac{5-3}{8} = \frac{2}{8}$
 $2 \times 48 = 96$
 $(48 \div 8) \times 2 = 6 \times 2 = 12$ more girls than boys

29 Below is a triangle.



(a) Find the total distance around the figure.
 $= 5 + 5 + 5$
 $= 20\text{cm} + 17\text{cm} + 17\text{cm}$
 $= 54\text{cm}$

(b) How many sides has the figure?

3 sides

30 Okello is 18 years and Akello is 25 years.
(a) Find the total age of the two people.

18 yrs
 $+ 25\text{ yrs}$

 43 years

(b) How old will Akello be when Okello is 21 years?

Difference in Okello's age at 21 years and 18 / Akello's age when Okello is 21 years

21 years
 $- 18\text{ years}$

 3 years

25 years
 $+ 3\text{ years}$

 28 years

(02 marks)

(a) Work out: $47296 + 35183$

$$\begin{array}{r} 47296 \\ + 35183 \\ \hline 82479 \end{array}$$

(02 marks)

(b) Subtract 982 from 1000.

$$\begin{array}{r} 9910 \\ + 000 \\ - 982 \\ \hline 18 \end{array}$$

(02 marks)

(c) Share 63 pens equally among 9 boys.

$$\begin{array}{r} 07 \\ 9 \overline{) 63} \\ \underline{07} \\ 63 \\ \underline{63} \\ -- \end{array}$$

$$\begin{array}{r} \times 9 \\ 19 \\ 218 \\ 327 \\ 436 \\ 545 \\ 654 \end{array}$$

Note: Use the divisor's multiplication table to ease division

\therefore Each boy will get 7 pens

(02 marks)

32 (a) Convert 132 five to base ten

F. five	Five	0
1	3	2



$$25 + 15 + 2 = 42 \text{ ten}$$

(b) Work out: $432_{\text{five}} + 343_{\text{five}}$

$$\begin{array}{r} 111 \\ 432_{\text{five}} \\ + 343_{\text{five}} \\ \hline 1330_{\text{five}} \end{array}$$

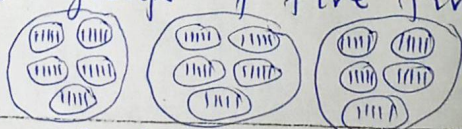
$$\begin{aligned} 2+3 &= 5 \\ 8 \div 5 &= 1 \text{ r } 3 \\ 1+3+4 &= 8 \Rightarrow 8 \div 5 = 1 \text{ rem } 3 \\ 1+4+3 &= 8 \Rightarrow 8 \div 5 = 1 \text{ rem } 3 \end{aligned}$$

$$1330_{\text{five}}$$

(c) Work out the value of 3 five fives.

(02 marks)

3 five fives = 3 groups of five fives



$$25 + 25 + 25 = 75$$

$$\begin{aligned} 3 \text{ five fives} \\ \downarrow \downarrow \downarrow \\ 3 \times 5 \times 5 \\ 3 \times 25 \\ = 75 \end{aligned}$$