THE SIPRO BEGINNING OF TERM I EXAMINATIONS 2024

PRIMARY SEVEN MATHEMATICS

Time Allowed: *2 Hours 30 Minutes*

	Random No.						Personal No.		
Index No.									

Candidate's Name: Tr Copy Tr. OKOT GEOFFREY

Candidate's Signature: 0789918069

School Random No: 0700907025

District ID: LUWERO

READ THE FOLLOWING INSTRUCTIONS CAREFULLY:

1. This paper has two sections: A and B.
2. Section A has 20 questions (40 Marks).
3. Section B has 12 questions (60 Marks).
4. Attempt all questions in both sections. All answers to both sections A and B must be written in the spaces provided.
5. All answers must be written in blue or black ball point pens or *ink*. Only diagrams and graph work must be done in *pencil*.
6. Unnecessary *alteration/crossing* of work will lead to loss of marks.
7. Any *handwriting* that cannot be easily read may lead to loss of marks.
8. Do not fill anything in the boxes indicated.

"FOR EXAMINER'S USE ONLY"

For Examiner's Use Only;

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SECTION A: 40 MARKS

Questions 1 to 20 carry two marks each

1 **Work out:**

$$\begin{array}{r} 53 \\ +16 \\ \hline 69 \\ \hline \end{array}$$

P.O.W

3 + 6 = 9

5 + 1 = 6

2 Given that set K = {q, v, z}. How many **subsets** has set K?

Sch

No of elements = 3

No of subsets = 2^n

$= 2^3$

$= 2 \times 2 \times 2$

= 8 subsets

3 Write **9,019** in words.

Nine thousand nineteen

4 What **morning time** is shown on the clock face?

It is 3:40 am

5 Kiiza bought a string of length 9,740cm. Express its **length** in metres.

Kenttm Dm m Dm Cm mm

1 0 0

1m = 100cm

y = 9,740cm

$\frac{100y}{100} = \frac{9740}{100}$

y = 97.4m

6 **Complete** the next number in the sequence below.

8, 9, 12, 18, 28, 43

+1 +3 +6 +10 +15

1

28

+15

43

7 Using a ruler, a pencil and a protractor only, draw an angle of **130°**

Draw a straight line and mark the midpoint, place the protractor at the centre and mark 130

8 Mawale bought a shirt at **sh 30,000** and later sold it making a loss of **sh. 2000**. Find his **selling price**.

Sch

Buying price = sh 30,000

Loss = sh 2000

Selling price = Buying price − Loss

= sh 30,000 − sh. 2000

= sh 80,000 − 2000

= sh 28,000

Law of integers
− x − = +
− x + = −
+ x − = −
+ x + = +

9 Use >, < or = to complete correctly.

$-3 + 6 \square 5 + -3$

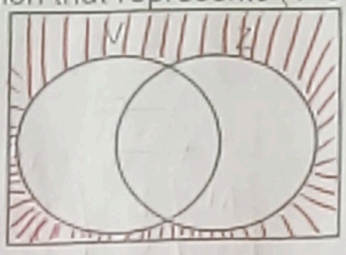
Soln

$-3 + 6 \square 5 + -3$

$-3 \square 5 - 3$

$-3 < 2$

10 On the venn diagram below, shade the region that represents $(V \cup Z)'$



11 Work out: $\frac{2}{3} + \frac{1}{2}$

Soln

$\frac{2}{3} + \frac{1}{2} = \frac{(2\times2) + (3\times1)}{6}$

$= \frac{4+3}{6}$

$= \frac{7}{6}$

$= 1\frac{1}{6}$

12 The following guests attended the birthday party of Olivia on Sunday.

𝍸 𝍸 𝍸 𝍸 |||

How many guests attended the party?

Soln

𝍸 𝍸 𝍸 𝍸 |||

5 + 5 + 5 + 5 + 3 = 23 guests attended the party.

13 Solve for W

W - 15 = 20

Soln

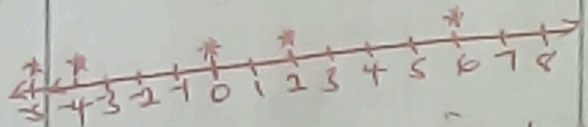
W - 15 = 20

W - 15 + 15 = 20 + 15

W = 35

14 Arrange 4°c, 2°c, 5°c, 6°c and 0°c in descending order.

Soln



Descending order = Biggest to smallest

= +6, +2, 0, −4, −5

15 My mother's age is thrice the age of her daughter. If their total age is 60 years, how old is the daughter?

Soln

Let the daughter's age be y

M	D	T
3y	y	60

$3y + y = 60$

$\frac{4y}{4} = \frac{60}{4}$

$y = 15$ yrs old

∴ the daughter = 15 yrs old

16 A cyclist travelled from Jinja to Iganga at an average speed of 80km/h in 90 minutes. Calculate the distance the cyclist covered.

Soln

Speed(s) = 80 km h^{-1}

Time = 90 minutes

= 90 to hrs

= 1½ hrs

D = S x T

S = D/T

T = D/S

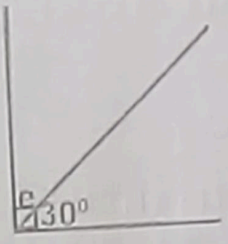
Distance = S x T

= 80 km x 3/2 hr

= 40 x 3

= 120 km

17 Find the size of angle marked e



Soln

Ne - Angle on a straight line add up to 180°

$e + 30° = 90°$ - Right angle add up to 90°

$e + 30° - 30° = 90° - 30°$

$e = 60°$

18 Twelve eggs cost sh. 6000. What will be the cost of three similar eggs?

Soln

12 eggs = shs 6000

1 egg = y

y = shs 500

∴ 1 egg = shs 500

3 eggs = P

$\frac{12y}{12} = \frac{6000}{12}$

P = 3 x 500

P = shs 1,500

19 How many 400ml bottles can fill a 12 litre bucket?

Soln

KL	HL	DL	L	DL	CL	mL
			1	0	0	0

1L = 1000mL

12L = K

K = (12 x 1000) mL

= 12000 mL

400

= 30mL

20 Given that  represents 8 oranges. How many oranges are represented by

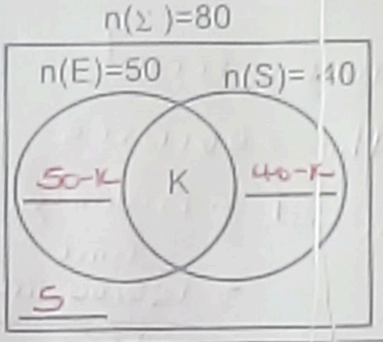
8 + 8 + 8 + 8 = 32 oranges

SECTION B: 60 MARKS

Marks for **each** *part of the question are* **indicated** *in the brackets.*

21 In a class of **80** pupils, **50** pupils like English (E), **40** pupils like science (S), **5** pupils like none of the subjects and K pupils like both subjects.

a) Complete the venn diagram below using the above information. *(03 marks)*



b) If a pupil is picked at a random, what is the **probability** of choosing one who likes both subjects? *(02 marks)*

$n(E \cap S) = 50-K+K+40-K+5 = 80$

$-K+K-K+50+40+5 = 50$

$-K+95 = 80$

$-K = 80-95$

$-K = -15$

$K = 15$ pupils

$P(\text{choosing both}) = \frac{n(E)}{n(\xi)} = \frac{15}{80}$

22 Given the digits 4, 0 and 6.

a) Form all the 3-digit numerals from the given digits without **repeating**. *(02 marks)*

No. formed = 4, 0, 6, 604, 640, 406, 460

b) Find the **sum** of the largest and smallest 3-digit numbers. *(02 marks)*

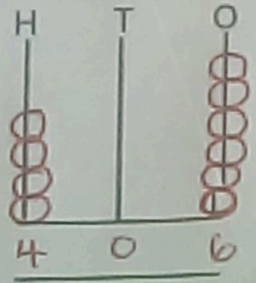
largest = 640

smallest = 406

1046

= 1,046

c) Show the **smallest** 3-digit number formed on the abacus. *(01 mark)*



23a) Work out years months (02 marks)

years	months
84	4
-2	9
2	7

12 + 4 = 16
16 - 9 = 7

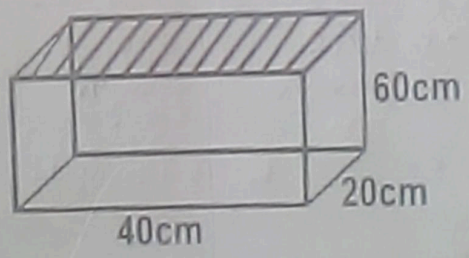
b) Express 180 km/h to m/sec (02 marks)

Soln

Distance in metres
1 Km = 1000 m
180 Km = y
y = (180 × 1000) m
y = 180,000 m

Time in seconds
1 hr = 3600 sec
speed = Distance / Time
= 180,000 m / 3600
= 50 m/s

24 The figure below is of a rectangular tank containing water. *Use it to answer the questions that follow*



a) Find the area of the shaded part. (02 marks)

Soln

A = L × W
= 40cm × 20cm
= 800 cm^2

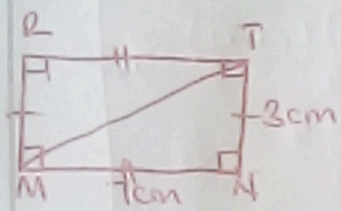
c) How many litres of water does the tank hold when completely full? (03 marks)

Soln

No of litres = Volume / 1000 cm^3
= 40cm × 20cm × 60 / 1000 cm^3
= 48000 cm^3 / 1000 cm^3
= 48 Litres

25a) Using a ruler, a pencil and a pair of compasses only, construct a **rectangle** MNTR where line MN = 7cm and line NT = 3cm *(04 marks)*

sketch



b) Draw a diagonal MT and measure angle TMN *(02 marks)*

Angle TMN = 45°

26. **Sserunjogi went to the shop and bought the following items:**

12 apples at sh. 2200 every 2 apples.

$2\frac{1}{2}$ litres of cooking oil at sh. 6000 per litre

3kg of rice at sh. 5500 per kg

5 oranges at sh. 3000

a) How much did he **spend altogether?** *(04 marks)*

apples | cooking oil | Total

12/2 x 2200 | 5/2 x shs 6000 | shs 15000

6 x 2200 | shs 15,000 | shs 16500

shs 13,200 | Rice = shs 5500 x 3 | shs 13200

shs 16500 | shs 3000

mangoes = shs 3000 | shs 47700

b) If he had a note of fifty thousand shillings. What was his **change?** *(02 marks)*

sol

change = shs 50,000 − shs 47700

shs 2,300

27a) Work out: $\frac{0.12 \times 0.36}{0.04 \times 0.3}$ *(03 marks)*

Soln

$\frac{0.12 \times 0.36}{0.04 \times 0.3} = \frac{12}{100} \times \frac{36}{100} \div \frac{4}{100} \times \frac{3}{10}$

$= \frac{3}{\cancel{12}_{10}} \times \frac{\cancel{36}^{3}}{\cancel{100}_{25}} \times \frac{\cancel{100}^{25}}{\cancel{4}_{1}} \times \frac{\cancel{12}^{3}}{\cancel{3}_{1}}$

$= \frac{3 \times 12 \times 1 \times 1}{10 \times 1 \times 1 \times 1}$

$= \frac{36}{10}$

$= 3.6$

b) Simplify: $\frac{3}{4} - \frac{1}{2} + \frac{1}{3}$ *(02 marks)*

800 mtr

Soln

$\left(\frac{3}{4} + \frac{1}{3}\right) - \frac{1}{2}$

$\frac{(3 \times 3) + (4 \times 1)}{12} - \frac{1}{2}$

$\frac{9+4}{12} - \frac{1}{2}$

$\frac{13}{12} - \frac{1}{2} = \frac{13-6}{12}$

$= \frac{7}{12}$

28a) Given that a = 6 and p = 4. Find the value of 2a + 3p *(02 marks)*

Soln algebra

$a = 6$

$p = 4$

$2a + 3p = (2 \times a) + (3 \times p)$

$= (2 \times 6) + (3 \times 4)$

$= 12 + 12$

$= 24$

b) Sarah thought of a number. She subtracted 8 from it. Find the number if the difference was 3 *(02 marks)*

Soln

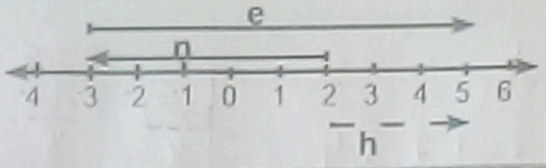
Let the no be y

$y - 8 = 3$

$y - 8 + 8 = 3 + 8$

$y = 11$

29. Use the number line below to answer the questions that follow.



a) Write the **integers** represented by the arrows. *(03 marks)*

n = -5

e = +8

h = +3

b) Form the **mathematical** additional statement for the above arrows shown on the number line. *(02 marks)*

n + e = h

-5 + 8 = +3

30. The table below shows the number of books which were distributed to three children by their father as follows:

Name of children	Doreen	John	Paul
Number of books	12	9	15

Show the above information on a **circle graph** of radius of **3.5cm**. *(05 marks)*

Total no of books = 12 + 9 + 15

= 36

Doreen = $\frac{12}{36} \times 360^{10}$

= 12 × 10

= 120°

John = $\frac{9}{36} \times 360^{10}$

= 9 × 10

= 90°

Paul = $\frac{15}{36} \times 360^{10}$

= 15 × 10

= 150°

31 The sum of three consecutive counting numbers is 78. Find the numbers. (04 marks)

Soln

Counting no = {1, 2, 3}

Let the n= be y

1st no	2nd no	3rd no	Sum
y	y+1	y+2	78

$y + y+1 + y+2 = 78$

$y + y + y + 1 + 2 = 78$

$3y + 3 = 78$

$3y + 3 - 3 = 78 - 3$

$\frac{3y}{3} = \frac{75}{3}$

$y = 25$

1st no	2nd no	3rd no
y	y+1	y+2
25	25+1 = 26	25+2 = 27

The no are; 25, 26, 27

32a) Work out 437×52 (02 marks)

$$\begin{array}{r} 437 \\ \times\ 52 \\ \hline 1874 \\ +\ 2185 \\ \hline 22724 \end{array}$$

4	3	7

4	3	7
0/8	0/6	1/4
2/0	1/5	3/5
7	2	14

22,724

b) Subtract 4537 from 8000 (02 marks)

Soln

$$\begin{array}{r} 7\ 9\ 9\ 10 \\ 8,000 \\ -\ 4,537 \\ \hline 3,463 \end{array}$$

c) Divide $9\overline{)19809}$ (02 marks)

Soln

$$\begin{array}{r} 2201 \\ 9\overline{)19809} \\ 18 \\ \hline 18 \\ 78 \\ \hline 00 \\ 0 \\ \hline 09 \\ 9 \\ \hline 0 \end{array}$$

$\therefore 19809 \div 9 = 2201$