KAMPALA PRIMARY EXAMINATION BOARD

PRIMARY SEVEN PRE – MOCK SET II EXAMS TERM II

ASSESSMENT 2024

MATHEMATICS

DURATION: 2 HOURS 15 MINUTES

INDEX NUMBER	EMIS NUMBER						PERSONAL NUMBER		

Name:.....

School:.....

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

Read the following instructions carefully

1. This paper is made up of two sections: A and B
2. Answers to both sections must be written in the spaces provided.
3. Section **A** has **20** questions (40 marks)
4. Section **B** has **12** questions (60 marks)
5. **Attempt ALL questions**. All answers to both Sections A and B **MUST** be written in the spaces provided
6. ALL answers must be written in blue or Black ball point or ink. Only diagrams And graphs work must be done in pencil
7. Unnecessary alternations of work will lead to loss of marks.

FOR EXAMINERS USE ONLY

QN.NO.	MARK	SIGN
1 - 10		
11- 20		
21- 22		
23- 24		
25- 26		
27- 28		
29- 30		
31- 32		
TOTAL		

SECTION A

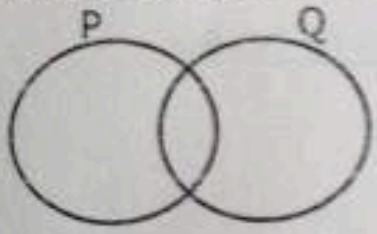
1. Workout: $56 + 23 =$

2. Simplify: $4y + y - 3y$

3. Write 840,017 in words

4. Find the next number in the sequence.
   12, 9, 6, 3, _____

5. Shade the complement of set PnQ.

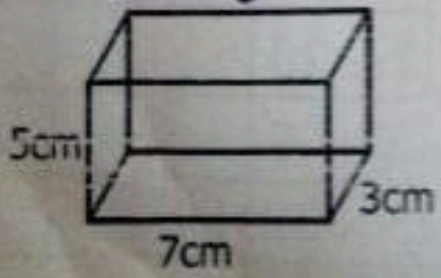


6. Shanitah had 15 pens in a bag. If 9 pens were red and the rest were black. What is the probability of picking a black pen at random?

7. Solve the inequality.
   $2(4 + y) < 18$

8. The area of a square flower garden is $196m^2$. Find the length of each side.

9. A wire is welded into the shape below. What is the length of this wire?



10. Given that $32_k = 110_{four}$. Find the value of k.

11. Emmanuel had $^5/_6$ of his salary and spent $^1/_4$ of it. What fraction remained?

$\frac{5}{6} \times \frac{1}{4}$

$\frac{(2\times5)\times(3\times1)}{12}$

$\frac{10\times3}{12}$

2 rem 6

36 | 18

1

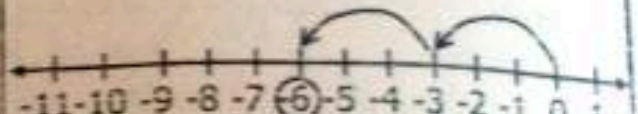
$= 2\frac{1}{2}$

$= 2\frac{1}{2}$

2	6	14
2	3	2
3	3	1
	1	1

$2\times2\times3=12$

12. Write the mathematical statement represented on the number line below.



$-3 + -3 = -6$

13. A regular polygon has 16 right angles. How many sides has the polygon?

$\text{Sides} = \frac{\text{Right angles}}{2}$

$= \frac{16}{2}^{8}$

$= 8$ sides

14. Hakim is thrice as old as Aisha. Their total age is 52 years. How old is Aisha?

Let the age of ~~Aisha~~ Hakim be a

Hakim	Aisha	Total
a	3a	52

$a + 3a = 52$

$\frac{4a}{4} = \frac{52}{4}$

$a = 13$

Aisha is 13 years old.

Aisha

15 12

+ 3

39

15. Find the number which has been expanded below.

$(2\times10^2) + (7\times10^{-1})$

$(2\times10\times10) + (7\times10)$

$200 + 70$

270.

∴ The number which has been expanded is 270.

16. Ojok bought 30 books at sh. 6000 per dozen. How much did he spend?

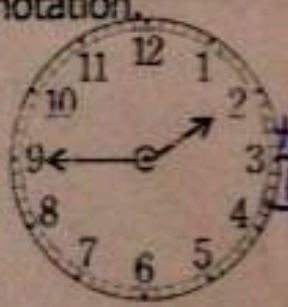
1 dozen = 12 books

12 books = Sh. 6000

30 books = (30 × Sh. 6000)

= Sh. 180000

17. Joyce ate lunch at the time shown below. Express this time in 24 Hour clock notation.



2:45

12 00

14:45

18. Workout: $14 \div \frac{2}{5}$

$\frac{14}{15} \div \frac{2}{5}$

$\frac{14}{15} \times \frac{5}{2}^{1}$

$= \frac{7}{3}$

∴ $\frac{14}{15} \div \frac{2}{5} = \frac{7}{3}$

11. Emmanuel had $^5/_6$ of his salary and spent ¼ of it. What fraction remained?

$\frac{5}{6} \times \frac{1}{4}$

$\frac{(2\times5)\times(3\times1)}{12}$

$\frac{10\times3}{12}$

2 item 6

$\frac{36}{18}$

1

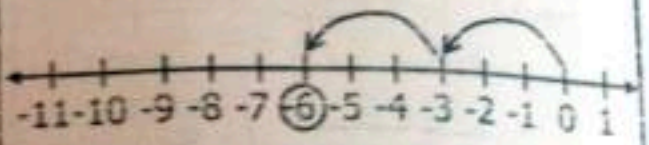
$=2\frac{1}{2}$

$=2\frac{1}{2}$

2	6	4
2	3	2
3	3	1
	1	1

$2\times2\times3=12$

12. Write the mathematical statement represented on the number line below.



$-3+-3=-6$

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Aisha is 39 years old.

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+ 3

39

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$(2\times10\times10)+(7\times10)$

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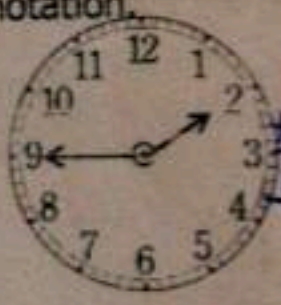


2:45

12 00

14:45

18. Workout: $14 \div \frac{2}{5}$

$\frac{14}{1} \div \frac{2}{5}$

$\frac{14}{1} \times \frac{5}{2}$

$\frac{35}{1}$

$=35$

$14 \div \frac{2}{5} = \frac{7}{15}$

19. Nyapendi has goats and sheep in the ratio of 3:2. If he has 24 goats, how many sheep does she have?

total ratio
3+2=5
4rem3

She
Sheep
$\frac{2}{5} \times 24$ | 48
$\frac{1}{5}$
$= 9\frac{3}{5}$

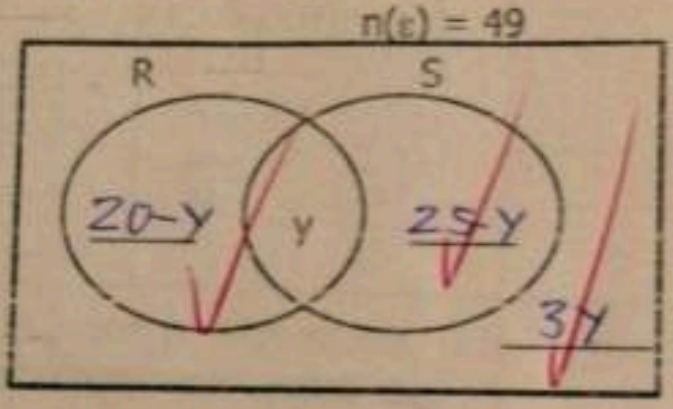
20. The LCM of two numbers is 72 and their GCF is 6. If one of the numbers is 24, find the second number.

Second no.
$\frac{3}{4} \times 72$
$= 24$
48

SECTION B

21. In a village of 49 farmers, 20 grow rice (R), 25 grow sorghum (S) and y grow both crops while 3y grow neither of the two crops.

a). Complete the Venn diagram below.



(3mks)

b). Find the value of y.

(2mks)

$20-Y+Y+25-Y+3Y=49$
$20+25+2Y+Y-Y=49$
$45+2Y=49$
$45-45+2Y=49-45$
$2Y=4$

$\frac{2}{2}Y = \frac{4}{2}$
$Y=2$

c). How many farmers grow neither rice nor sorghum?

(1mk)

$3Y=(2\times2)\times2$
$=3\times2\times2$
$=4\times2$
$=8$

8 farmers grow neither rice nor Sorghum.

22a) Express 0.0508 in scientific form.

(2mks)

0.0508
$\frac{0508}{10000}$

b). Write 144 as a product of its prime numbers. (2mks)

144 ÷ 2 = 72
144 ÷ 4 = 36
144 ÷ 6 = 18
144 ÷ 12 = 12

144 = 2 × 2 × 2 × 2 × (3 × 3)
144 = 16 × 9
144 = 5H

23. **A woman went shopping and brought the following items as shown in the table below;**

Item	Quantity	Price	Amount
Rice	3kg	sh. 3800 per kg	sh. 11400
Meat	2 kg	sh. 12000 per kg	sh. 6000
Cooking oil	500ml	sh. 7000 per litre	sh. 14000
Total			**sh.** 134000

a). Complete the above shopping table. (4mks)

Rice
A = P × R
3kg × Sh. 3800
Sh. 11400

Meat
a = A/P
= Sh. 12000 / Sh. 12000
= 1 / 1
= 2 kg

Cooking oil
500ml × Sh. 7000
(200 × Sh. 70)
Sh. 14000

Total
Sh. 11400
Sh. 14000
Sh. 600
Sh. 134000

b). How much did she pay for all the items if she was given a 10% discount? (2mks)

100% + 10%
110%

110% / 110% × Sh. 134000
(Sh. 134000 × 11)
Sh. 147400

24a). A lady was born in 14 BC and died in 30 AD. How old was she when she died? (3mks)

14 BC
+30 AD
44 BCAD

b). In a quiz with 25 questions, a teacher awarded 4 marks for each correct answer given and deducted one mark for every wrong answer. If Allan got 22 questions correct, how many marks did he get? (3mks)

1 question = 4 marks
25 questions = (25 × 4) marks
= 100 marks

22 questions = (22 × 4)m
= 88 mar

38 × 3
200 × 70 = 0 60
134 × 11
22 × 4

25a) Decrease 600 by 15%

(2mks)

15% + 100% = 115%

20 × 2 = 40%

b). A shopkeeper sold a radio at sh. 120,000 and made a profit of 20%. Find the cost price of the radio.

(3mks)

100% − 20% = 80%

80% x Sh 120,000

Sh 96000

26. Kato drove his car from town A to town B between 10.30pm and 1:10am.

a). How long did he take to cover the distance?

(3mks)

D = E.T − S.T

1 : 10 a.m

12 : 60

13 : 10 a.m

12 : 10 am

10 : 30 p.m.

2 : 40 P.M

∴ He took 2 hours 40 minutes to cover the distance.

b). If the distance between towns A and B is 180km, calculate the speed at which Kato was travelling.

(2mks)

S = D/T

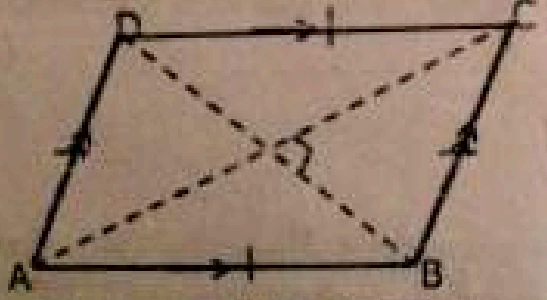
S = 180 km / 2 4/6 hrs

S = 180 km ÷ 4/6 hrs

S = 180 × 6/4 km/hr

S = 270 km/hr

27. The diagram below shows a rhombus ABCD whose diagonals AC = 24cm and BD is 10cm



AC = 24 cm

= 12 cm

BD = 10 cm

= 5 cm

a). Find the area of the rhombus.

(2mks)

A = L x W x L x W

= (12cm x 5cm) x (12cm x 5cm)

= 60cm x 60cm

A = 3600 cm²

b). Calculate its perimeter. (4mks)

$P = L + W + L + W$

$= 12cm + 5cm + 12cm + 5cm$

$= 17cm + 17cm$

$= 34cm$

28. Susan has two children, a son and a daughter. If the son is half her age, the daughter is a third her age and the total age of the two children is 30 years.

a). Find Susan's age. (3mks)

Let the Susan's age be n

Susan	Daughter	Total
n	$2n$	30

$n + 2n = 30$ years

$\frac{3n}{3} = \frac{30}{3}$ years

$n = 10$ years

b). How old is the son? (1mk)

$\frac{1}{2} \times 10$ years

5 years

29. A cylindrical tank of diameter 70cm contains water to a height of 100cm. Find the amount of water the tank contains in litres. (4mks)

$\frac{1}{2} \times \pi D^2 H$

$= \frac{1}{2} \times \frac{22}{7} \times \frac{35}{1} \times \frac{35}{1} \times 100$

$\frac{1}{2} \times 22 \times 35 \times 100$

$= 11 \times 35 \times 100$

$= 38500$ litres

30. Given that $x = 3y$ and $y = 5$. Find the value of: (3mks)

i). $2y + 6x$

$x = 3y \quad y = 5 \quad x = 3y$

$2y = (5 \times 2) + 6x = (6 \times 15)$

$= 10 + 90$

$2y + 6x = 10 + 90$

$= 100$

(2mks)

ii). x^2

$x^2 = 3y + 3y$

$= (15 + 15 + 15 + 15 + 15 + 15)$

$15 + 15 = 30$

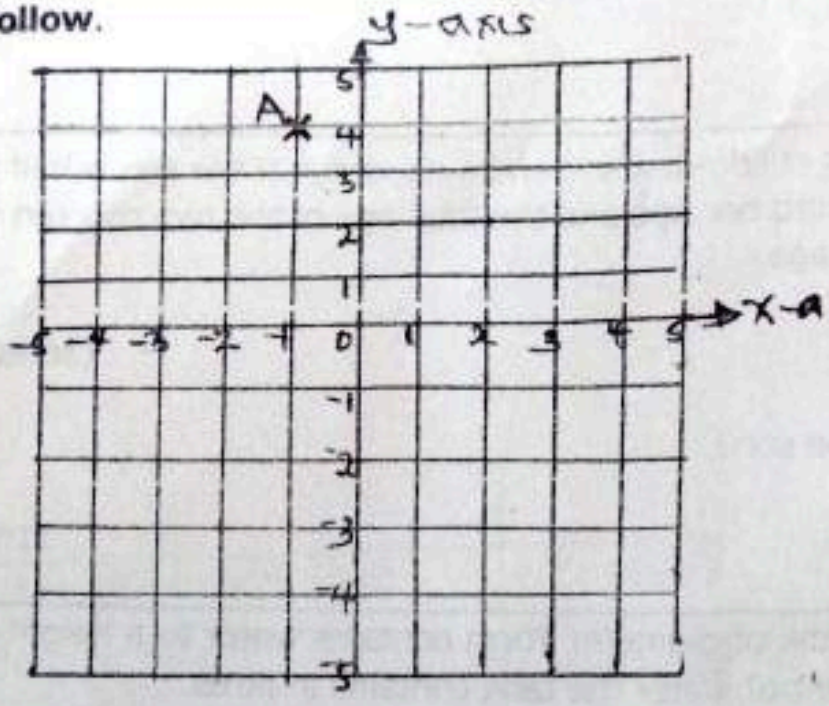
31. The total mass of tins of honey in a box is 3.25kg. The mass of each tin is 250g. find the number of tins in the box. (4mks)

$\frac{325}{100} kg \times \frac{250}{1000}$

$\left(\frac{325}{100} \times \frac{100}{250}\right)$ tins

$= 13$ tins

32. **Study the coordinate graph below and use it to answer questions that follow.**



a). Write the coordinates of point A (1mk)

b). Plot the points B(⁺2, ⁺2) and C(⁻4, ⁻1) on the graph. (2mks)

c). Joints points A to B, B to C and C to A. (1mk)

d). Name the figure formed above.

The End