OUTREACH SCHOOLS EXAMINATIONS BOARD

BEGINNING OF TERM III EXAMINATION 2023

P.6 MATHEMATICS

Time Allowed: 2hours 30 Minutes

Pupil's Name: .....

Class: .....

School Name: .....

Read the following instructions carefully:

1. This paper has two sections: **A** and **B**
2. Section **A**has 20 short questions (40 marks)
3. Section **B** has 12 questions (60 marks)
4. Answer allquestions. All the working for both sections Aand Bmust be shown in the spaces provided.
5. Allworking must be done using a blueor blackball point pen or ink. Any work done in pencil will NOTbe marked except drawings and diagram.
6. Unnecessary changesin your work and handwriting that cannot be easily read may lead to loss of marks.
7. Do not fill anything in the table indicated **"For examiners' use only"**and the boxes inside the question paper.

FOR EXAMINERS' USE ONLY		
Qn. No.	**MARKS**	**EXR'S No.**
1 - 10		
11 – 20		
21 – 30		
31 – 32		
TOTAL		

Turn Over

Section A (40 marks)

1. Work out: 59 – 34

2. Write 24,018 in words.

3. Simplify: $\bar{8} - \bar{5}$

4. Given that P = {1, 2, 3, 4, 7, 8} and Q = {1, 4, 5, 6, 8, 9}. Find n(P U Q).

5. Find the sum of the 4^{th} and 6^{th} prime numbers.

6. Collect like terms: 2y – 3p + 6y + 6p

7. A birthday party lasted for 3 ½ hours. Express this time in minutes.

8. Work out: $\frac{3}{4} \div \frac{15}{16}$

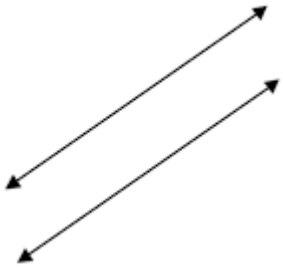
9. Express 72 as product of prime factors.

10. A train traveled at a speed of 30km per hour. How long did it take to travel 150km?

11. Six books cost shs: 48000. What is the cost of seven similar books?

12. By selling a shirt for sh. 24,000, a trader makes a profit of sh. 6,500. What was the cost price of the shirt?

13. Name the type of lines drawn below.



14. Change 750 metres into kilometers.

15. What is the median of the following:
17, 30, 36, 25 and 29?

16. Using a pair of compasses, a pencil and a ruler, only, construct an angle of 60^0.

17. Increase 40 bags in the ratio of 2 : 5

18. Find the value of the digit in the ten thousands place in the number 395,687.

19. Work out: 2.79 – 3.25 + 5.34

20. A lorry carried 8,142 loaves of bread in 23 trips. It carried the same number of loaves each trip. How many loaves did it carry each trip?

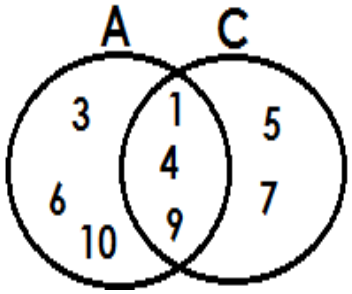
Section B (60 marks)

21(a) Change 102_{five} to base ten. **(2 marks)**

(b) Work out: $3\ 1\ 2_{five}$ **(2 marks)**

$+\ 2\ 4\ 1_{five}$

22. Use the Venn diagram below to answer the questions that follow.



(a) Write down the members of set A. **(1 mark)**

(b) Write down the members of set C. **(1 mark)**

(c) Find:

(i) n(A – C) **(2 marks)**

(ii) n(AUC) **(1 mark)**

23. Mapesa bought the following items from a shop:

2Kg of sugar at sh. 2,800 per kg

4 bars of soap at sh. 3,500 per bar

3 tubes of toothpaste at sh. 7,500

1 ½ kg of salt at sh. 1,200 per kg

(a) How much did he spend altogether? **(5 marks)**

(b) If he had 3 ten thousand shilling notes, what was his change? **(1 mark)**

24(a) Four men take 6 days to clear a piece of land. How many more men are needed to clear the same piece of land in three days? **(4 marks)**

25(a) Find the simple interest on SHS: 600,000 at rate of 10% per annum for 6months.

(b) Write a single fraction for $12\frac{1}{2}\%$ **(3 marks)**

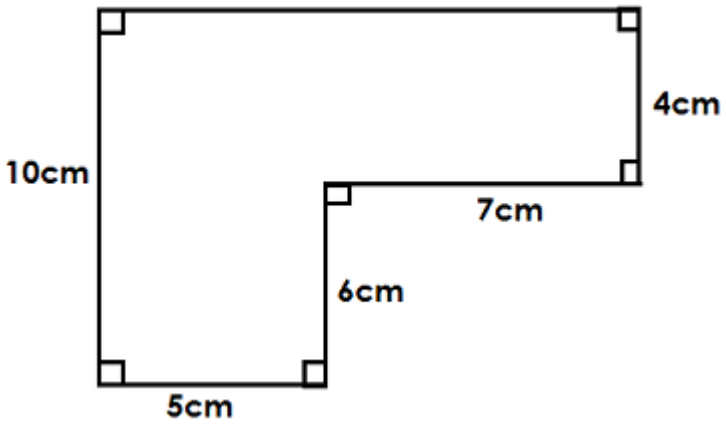
26. A girl spends $^1/_5$ of her pocket money on sweets and $^2/_3$ on drinks.

(a) What fraction does she spend? **(2 marks)**

(b) If she has a pocket money of sh. 48,000, how much does she spend on drinks?
(2 marks)

27. Using a pair of compasses, a pencil and a ruler only, construct an equilateral triangle ABC in which AB = BC = CA = 6cm. **(4 marks)**

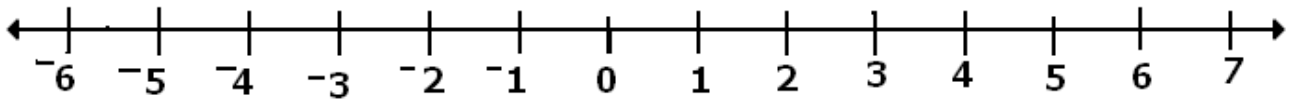
28. **Study the figure below and use it to answer the questions that follow.**



(a) Calculate its perimeter. **(3 marks)**

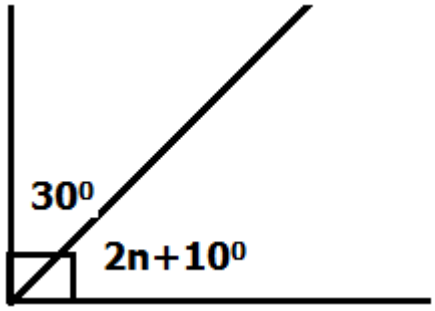
(b) Work out its area. **(3 marks)**

29(a) Work out $^{-}6 + {}^{+}4$ using the number line below. **(3 marks)**

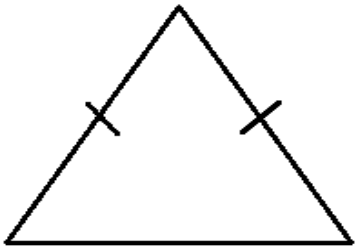


(b) The temperature of water at room temperature is $15^{o}C$ and that of ice is $^{-}7^{o}C$. Find the difference in temperature between water and ice. **(2 marks)**

30(a) In the figure below, find the value of **n**. **(3 marks)**

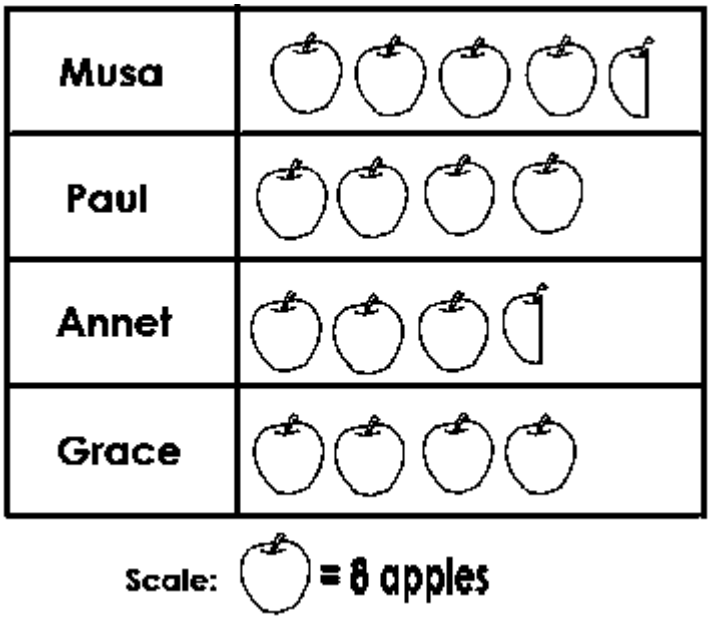


(b) How many lines of folding symmetry does the figure below? **(2 marks)**



31. A bus traveled from town A to town B at a speed of 90km per hour for 3 hours. It then traveled from town B to town C at a speed of 75km per hour for 2 hours. Calculate the total distance traveled from A to C. **(5 marks)**

32. **The pictograph below shows the number of apples given out to some pupils in a P.6 class.**



(a) Who got the same number of apples? **(2 marks)**

(b) How many apples did Annet get? **(2 marks)**

(c) Work out the average number of apples given out to each pupil. **(2 marks)**

END