# THE MODERN TIMES EXAMINATIONS

PRIMARY LEAVING EXAMINATION

SPECIAL MOCK

**2025**

**MATHEMATICS**

*Time allowed: 2 hours 30 minutes*

| Random No. | | | | | | Personal No. | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**Candidate's Name: .....**

**Candidate's Signature: .....**

**District ID No.**

| | | | |
|---|---|---|---|
| | | | |

**Read the following instructions carefully:**

**1.** Do not write your **School** and **district name** anywhere on this paper.

**2.** This paper has **two** sections: **A** and **B** Section **A** has **20 questions** (40 marks) and Section **B** has **12 questions** (60 marks) printed altogether.

**3.** Answer **ALL** questions. **All** the working for **both** Sections **A** and **B** must be shown in the Spaces provided.

**4.** All working must be done using a **blue** or **black** ball point pen or ink. Any work done in pencil other than graphs and diagrams will not be marked.

**5.** **No calculators** are allowed in the examination room.

**6.** Unnecessary **changes** in 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 **Examiner's use only** and the boxes inside the question paper.

| FOR EXAMINERS' USE ONLY | | |
|---|---|---|
| **QN. NO.** | **MARKS** | **EXR'S INITIALS** |
| **1 - 5** | | |
| **6 - 10** | | |
| **11 - 15** | | |
| **16 - 20** | | |
| **21 - 22** | | |
| **23 – 24** | | |
| **25 - 26** | | |
| **27 - 28** | | |
| **29 - 30** | | |
| **31 - 32** | | |
| **TOTAL** | | |

**Turn Over**

## SECTION A (40 MARKS)

***Answer all questions in this section.***

***Questions 1 to 20 carry two marks each.***

1. Multiply **3 × 4** using repeated addition.

2. Write **XLIX** in words

3. Express **20cm** as a percentage of **2metres**.

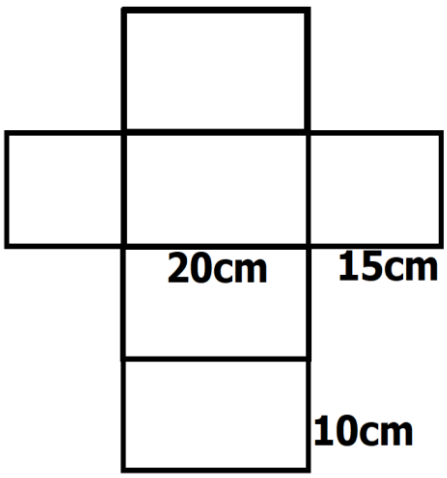
4. Change $\mathbf{121_{three}}$ to base ten.

5. The lowest common multiple of two numbers is **48** and their Greatest common factor is **8**. If the first number is **12**, find the second number.

6. Solve: **$3k + 4 \leq 5k + 12$**

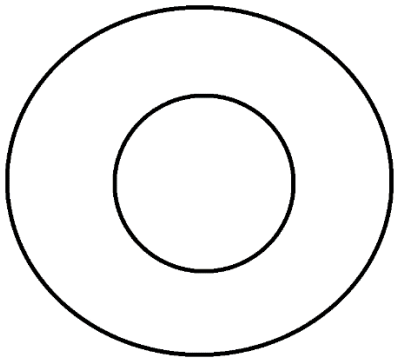
7. A baby slept at **11:25pm** and woke up at **1:05am**. For how long did it sleep?

8. The figure below is a net of a three-dimensional figure. Find its volume.



9. Solve for **y** in **2(y – 10) = 10**

10. In the Venn diagram below, show and shade **A∩B = B**



11. Find the supplement of **$(m + 100)^0$**

12. A car covers **48km** in **20 minutes**. How far will it cover in one hour?

13. After selling an article at **sh. 21,000**, a trader made a profit of **20%**. Calculate the cost price of the article.

14. Solve for **p**: $\mathbf{3^{2p-1} \times 3 = 81}$

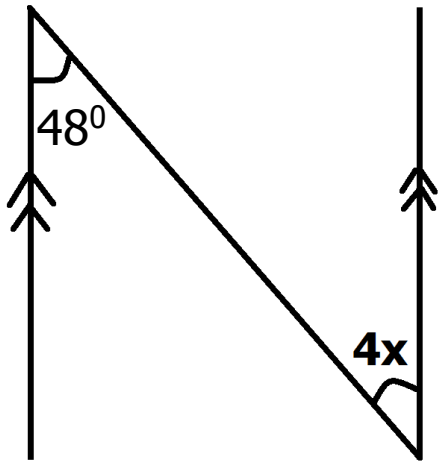
15. Workout: **(27 × 5) + (73 × 5)** using distributive property.

16. Using a ruler, pencil and a pair of compasses only. Construct an angle of $\mathbf{150^0}$.

17. Simplify: **-8 – 7**

18. A box full of pens weighs **11.5kg** and a half box of pens weighs **6.5kg**. Find the net weight of all the pens in the box.

19. Find the value of x in the figure below.

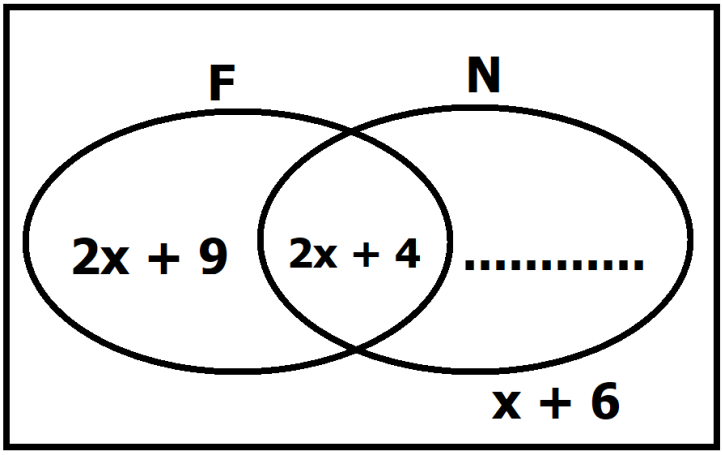



20. Sam and Peter have a task of digging a pit. Sam alone can dig the pit in **24 days**. If the two people working together can dig the pit in **6 days**, how many days can Peter alone take to dig the same pit working at the same rate?

## SECTION B: 60 MARKS

*Answer all questions in this section.*
*Marks for each question are indicated in brackets.*

21. The Venn diagram below shows the number of pupils who like Football **(F)** and Netball **(N)**. The number of pupils who like Netball only is twice those who like neither of the two games.
a) Complete the Venn diagram using the above information. (1 mark)




b) If the number of pupils who like both games is the same as those who like none of the two games, find the number of pupils who played only one type of game? (4 marks)

22. A headteacher bought pens to be issued to some learners. When they were grouped in nines, seven pens remained, in eights, four pens remained while in threes, one pen remained. How many pens did the headteacher buy? (4 marks)

23. a) Change **0.422...** as a rational number. (3 marks)

b) Simplify: $\frac{\mathbf{2.4 \times 3.6}}{\mathbf{0.12 \times 0.02}}$ (3 marks)

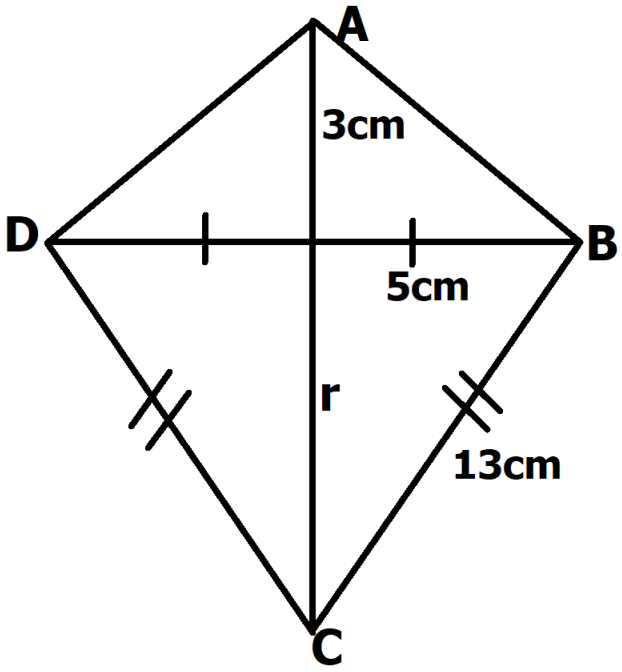
24. a) Which number when added to **249** makes it exactly divisible by **3, 4, 5** and **6**. (3 marks)

b) The mean of $\frac{1}{2}\boldsymbol{k}$ and $\frac{3}{4}$ is $\frac{5}{9}$ . Find the value of **k**. (2 marks)

25. The ratio of boys to girls in a class is **1 : 2** respectively. $\frac{2}{5}$ of the boys are in lower primary classes and $\frac{3}{4}$ of the girls are in upper primary classes. The total number of pupils in upper primary classes is **42**.
a) Find the total number of pupils in the class. (5 marks)

b) Find the number of boys in upper primary classes. (1 mark)

26. Study the figure below and answer the questions that follow.

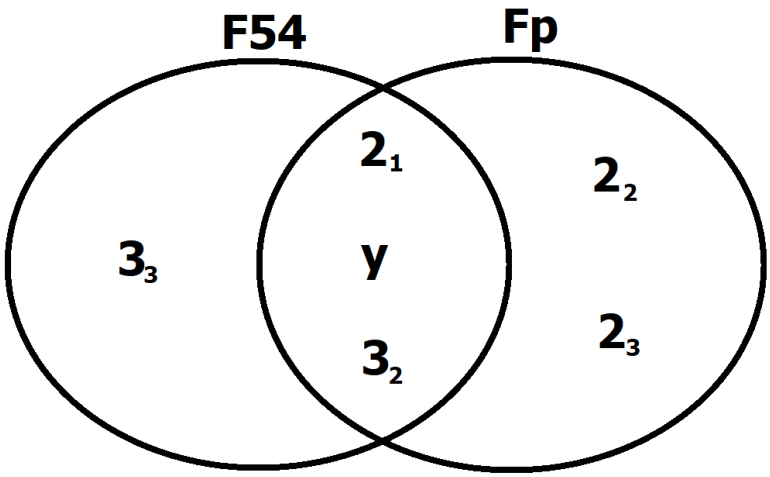



a) Find the value of r. (2 marks)

b) Calculate the area of the figure above. (2 marks)

27. **36 men** working for **10 hours** a day build a house in **75 days**. How many men are required to build **4** similar houses in **60 days** working for **8 hours** a day? (4 marks)

28. Study the Venn diagram below carefully and answer questions that follow.

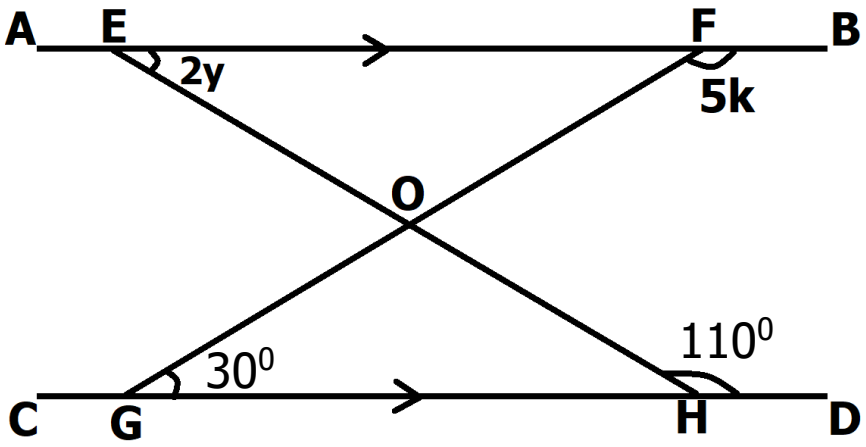



a) Find the value of: (2 marks each)

i) **y** ii) **p**

b) Find the **GCF** of **F54** and **Fp**. (2 marks)

29. In the figure below line **AB** is parallel to line **BC**. Study it carefully and answer the questions that follow.




a) Find the value of **y** and **k**. (4 marks)

b) Find the size of angle **HOG**. (2 marks)

30. Wasswa went to the market with **sh. 30,000**. She bought the items shown in the table below. After paying for all the items, she remained with **sh. 9,250**. Complete the table. (5 marks)

| ***Item*** | ***Unit cost*** | ***Amount*** |
|---|---|---|
| *2kg of sugar* | *Sh. 4,000 per kg* | *Sh. .....* |
| *3 loaves of bread* | *Sh. ..... per loaf* | *Sh. .....* |
| *..... litres of milk* | *Sh. 1,500 per litre* | *Sh. 2,250* |
| ***Total expenditure*** | | *Sh. .....* |

31. The sum of three consecutive integers is **96**. If the last integer is **h**.
a) Find the integers. (3 marks)

b) Find their range. (1 mark)

32. Kumi is on a bearing of **$120^0$** from Gulu which is **90km** away. Kampala city is **70km** away on a bearing of **$220^0$** from Kumi.

a) Draw a sketch to represent the three towns. (1 mark)

b) Using a scale of **1cm** to represent **10k**m. Draw an accurate diagram showing the position of the three towns. (4 marks)

c) Find the shortest distance from Gulu to Kampala city. (1 mark)

*** END ***