# THE E-LEARN EXAMINATIONS BOARD

P.7 PRE PLE SET FOUR / TEN

## 2024

MATHEMATICS

*Time Allowed: 2 hours 15 minutes*

| Index No. | EMIS No. | | | | | | Personal No. | | |
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**Pupil's  Name:** ………………………………………………………………………..

**Pupil's  Signature:** ……………………………………………………………….

**School  Name:** ………………………………………………………………………..

**District  Name:** …………………………………………………………………………

**Read the following instructions carefully:**

1.  Do not forget to write your **school** or **district name** on the paper.

2.  This paper has two sections: **A** and **B**. Section **A** has **20** questions and section **B** has **12** questions. The paper has **10** printed pages altogether.

3.  Answer **all** questions. **All** working for both sections **A** and **B** must be shown in the spaces provided.

4.  **All** answers **must** be written using a **blue** or **black** ball point pen or ink. Any work written in pencil will **not** be marked.

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: **"For Examiners' use only"** and boxes inside the question paper

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

1.   Work out: 33÷3

2.   Write "**ninety thousand, forty**" in figures.

3.   Find the sum of the next two numbers in the sequence below.

   1, 3, 6, 10, 15, 21, ...................., ..........................

4.   Given that set M = {0, 2, 4, 6, 8} and set N = {2, 3, 5, 7} Find the ∩(M∩N)

5.   What number has been expanded to give; $(5 \times 10^4) + (3 \times 10^2) + (2 \times 10^1)$

6. Express 72 km/hr as metres per second.

7. Using a ruler, a pencil and a pair of compasses only, construct an angle of 45° in the space provided below.

8. Subtract (2x-3) from (4x-6).

9. How many 400 gram packets of salt can be obtained from 20 kg of salt?
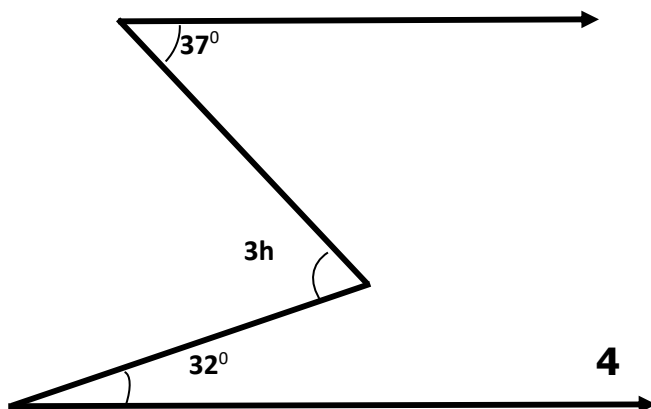
10. Find the median of the numbers 4, 9, 5, 8, 5 and 7.

11. Today is Wednesday. What day of the week was it 45 days ago?

12. Find the square root of $1\frac{11}{25}$

13. Simplify: $\frac{7}{12} - \frac{1}{3}$

14. Express 40 cm as a percentage of 2 metres.

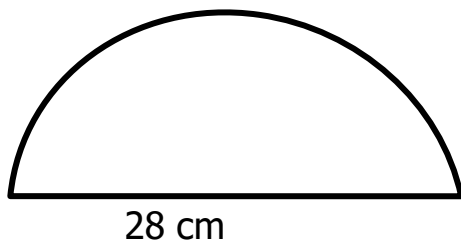15. Find the value of **h** in degrees in the diagram below.

16. Twelve men can do a piece of work in 5 days. How many more men are needed to do the same piece of work in 3 days?

17. Solve: 4-2m = 8

18. If  represent 18 bananas. How many bananas are

    represented by  ?

19. Find the perimeter of the figure below. (Use $\pi = \frac{22}{7}$)



   28 cm

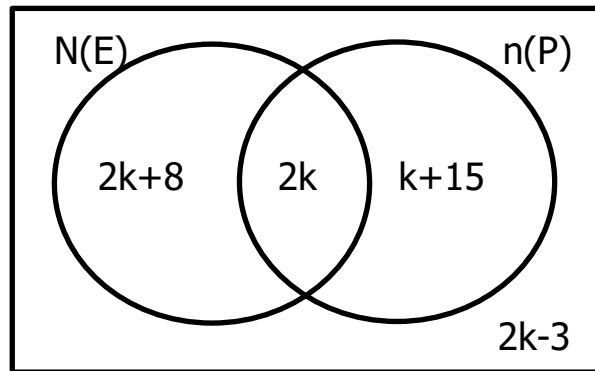20. The graduation ceremony of Mr. Duru started at 10: 30 pm and ended at 3:00 am. How long did it last?

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

*Marks for each question are indicated in brackets.*     **Turn Over**

21.   The Venn diagram below shows the number of girls who like mangoes (M) and passion fruits (P). Use It to answer the questions that follow.



(a)   Find the value of k if 20 girls like mangoes.                    *(03 marks)*

(b)   What is the probability of picking a girl at random who likes one type fruit only?                    *(02 marks)*

22.   (a) Work out: $101_{two}$ x $1\ 1_{two}$                    *(02 marks)*

(b) If $203_n = 53_{ten}$, find the value of n. *(03 marks)*

23. Birungi went to the shop and bought the following items.

    3 toothbrushes at sh. 3,000 each.

    2 tubes of toothpaste at sh. 5,000 each.

    4 tablets of bathing soap at sh. 4,000 per tablet.

    2 bars of washing soap at sh. 3,500 per bar.
   (a) How much money did Birungi spend altogether? *(05 marks)*

   (b) If she went with a fifty thousand shilling note, find her balance. *(01 mark)*

24. Ngobi spends $\frac{2}{3}$ of his monthly salary on food, ¼ of the remainder on rent and saves sh. 90,000. Calculate his monthly salary. *(04 marks)*

25. A Queen Coach traveling at 55 Km per hour took 4 hours to cover part of its journey. The rest of the journey was covered in 2 hours at a speed of 40 Km per hour. Find the average speed of the Coach for the whole journey.
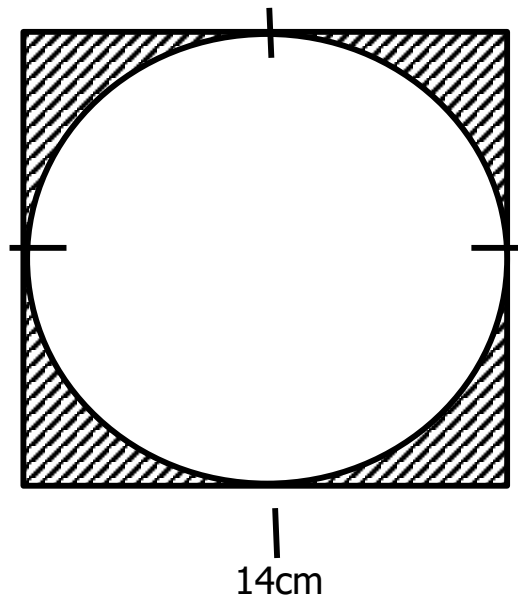
*(04 marks)*

26. (a) Work out: $\dfrac{0.8 \times 0.6}{2.4 \times 0.4}$ *(03 marks)*

(b) Simplify: $1\frac{1}{2} \times 2\frac{1}{4} \div 1\frac{1}{8}$  *(02 marks)*

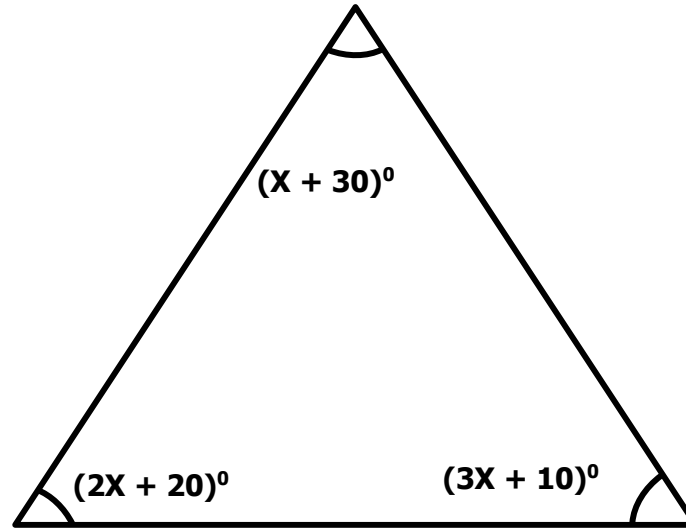27.  Find the area of the shaded part in the figure below.  *(05 marks)*

14cm

28.  Mary, Teddy and Jannet contributed a certain amount of money in the ratio of 5: 3: 7. If Teddy and Mary contributed sh. 240,000;
(a) Find their total share.  *(03 marks)*

**Turn Over**

(b) How much more money did Jannet contribute than Mary?     *(02 marks)*

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

$(X + 30)^0$

$(2X + 20)^0$                    $(3X + 10)^0$

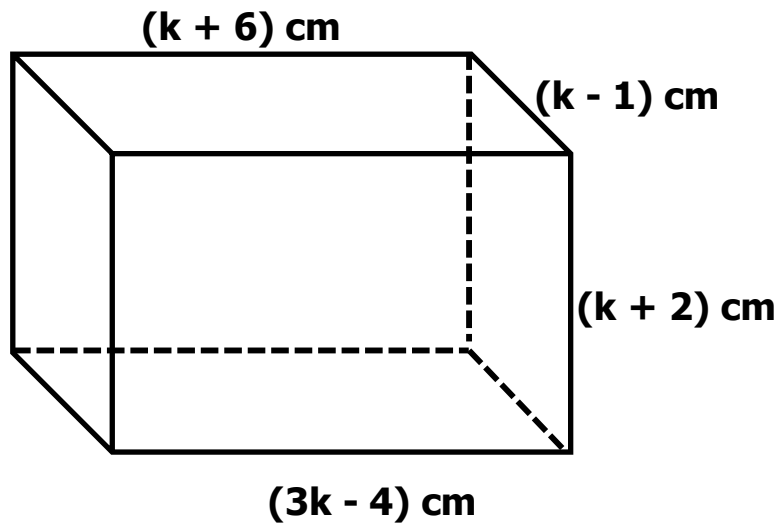(a)     Find the value of x.                                        *(03 marks)*

(b)     Calculate the size of angle PQR.                           *(02 marks)*

30. Use the figure below to answer the questions that follow.



**(k + 6) cm**

**(k - 1) cm**

**(k + 2) cm**

**(3k - 4) cm**

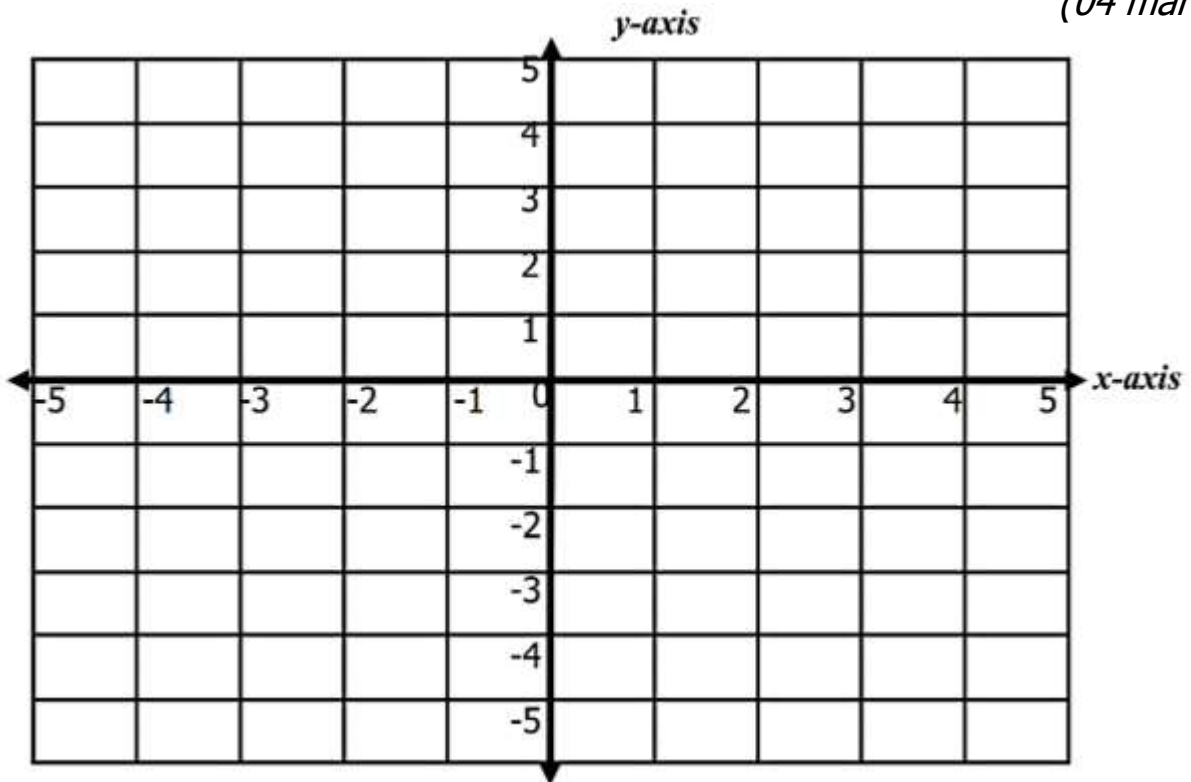    (a)   Find the value of k.                                                *(02 marks)*

    (b)   Calculate the volume of the figure.                            *(02 marks)*

31.   (a) Solve: $6(x - 2) - (2x - 6) = 6$                         *(03 marks)*

**Turn Over**

(b) A man is 25 years older than his son now. In 15 years' time, he will be twice as old as his son. How old is each of them now? *(02 marks)*

32. (a) Plot the points A(-2, 2), B(3, 2), C(4, -4) and D(-3, -4) on the graph drawn *(04 marks)*



(b) Join points A to B, B to C, C to D and D to A. *(01 mark)*

(c) Find the area of the figure formed. *(02 marks)*

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**END**