



**THE NERDS EXAMINATION SERIES**  
**P.7 EXAMINATIONS 2024 (SET 8)**  
**MATHEMATICS**

*Time allowed: 2hours 30minutes*

**INDEX  
NO.**

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CANDIDATE'S NAME.....

CANDIDATE'S SIGNATURE .....DATE .....

SCHOOL'S EMIS NO.....

DISTRICT NAME .....

**READ THE FOLLOWING INSTRUCTIONS CAREFULLY:**

1. This paper has two sections **A** and **B**
2. All the working in both sections **A** and **B** should be shown in the spaces provided.
3. All working must be done using blue or black point pen or fountain pen. Diagrams must be drawn in pencil.
4. Unnecessary changes of work may lead to loss of marks.
5. Any handwriting that cannot be easily read may lead to loss of marks.
6. Do not fill in anything indicated for examiners use only and those inside the paper.

*For examiner's use only*

SECTION	MARKS
SECTION A	
SECTION B	
TOTAL	

## **SECTION A**

1. Workout:  $307$

$$\begin{array}{r} + 52 \\ \hline \end{array}$$

2. Write 97 in Hindu Arabic numerals.

3. Solve  $\frac{2P^2}{3} = 24$

4. Round off 29.561 to the nearest ones.

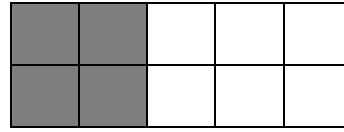
5. Express 12056kg in tones.

6. Simplify:  $^{-}7 - ^{-}2$

7. Find the next number in the sequence.

1,3,6,11,18,29,\_\_\_\_\_

8. What percentage of the figure is unshaded?



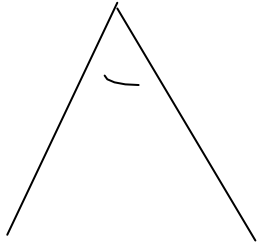
9. Find the median if 5, 2, 0, 3 and 4

10. Find the value of  $2(a-b)$ , if  $a = 5$  and  $b = ^{-}3$

11. A maths workshop ended at 9:10am. At what time did it start if it took 55 minutes.

12. Workout:  $24 \div 1.5$

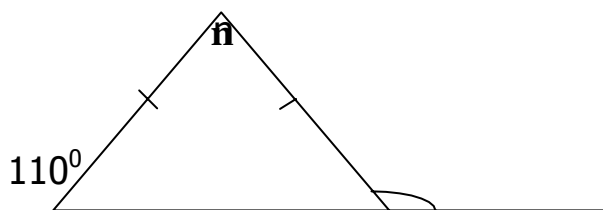
13. Using a pair of compasses, a ruler and a pencil only, bisect the given angle below.



14. Subtract  $3a - 2b$  from  $5a + 3b$

15. Simplify:  $10^5 \div 10^2$

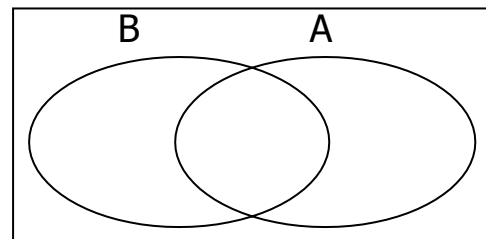
16. Find the value of  $n$  in degrees.



17. Express  $0.666\ldots$  as a fraction.

18. The average weight of 6 men is 40kg. Two men weighing 40kg and 20kg leave the group. Find the average weight of the remaining 4 men.

19. Shade  $(A-B)$  complement.



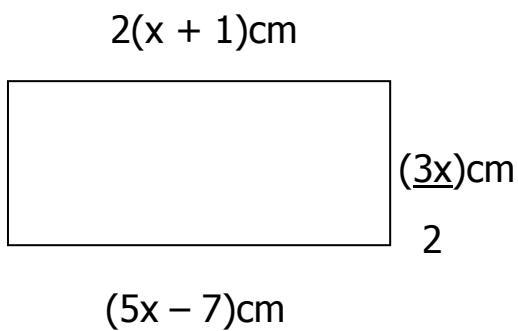
20. The interior angle of a regular polygon is 120. How many sides does the polygon have?

**SECTION B (60 MARKS)**

21. a) In a class, the ratio of boys to girls is 3:5, if there are 24 boys in the class, how many girls are there?

- b) How many more girls than boys are in the class?

22. Find the area of the figure below.



23a) Simplify  $3(2x - y) - (x - 3y)$

b) Given that  $n = 12$ ,  $w = 8$  and  $P = 9$ .

Workout

$$\frac{np + 4w}{2p}$$

2p

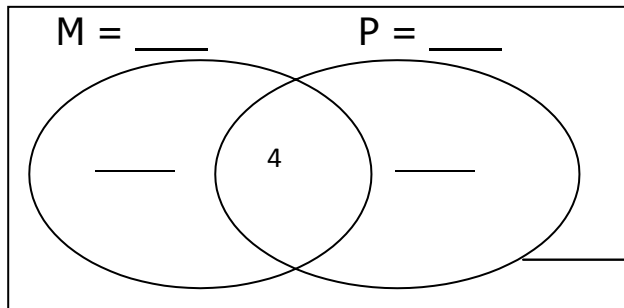
24. A driver travelled for 3 hour 45 minutes at an average speed of 64km/hr. How long did it take on the return journey at an average speed of 80km/hr?

25. Musoke is 10 years younger than Ali. In 5 years time, Ali will be twice as old as Musoke. How old is Musoke now?

26. In a class of 56 pupils, 30 pupils eat matooke (M), X pupils eat potatoes (P) only, 4 pupils eat both matooke and potatoes while 2 pupils eat neither of the two types of food.

a) Complete the Venn diagram given below using the information above.

b) Find the value of x.



c) How many pupils do not eat potatoes?

27. a) Joy went with sh. 21,000 and bought the following;

- 3kg of sugar at sh. 2400 each
- 4 packets of salt for sh. 1000.
- 2kg of rice at sh. 2400 per kg.
- 1 ½ kg of meat at sh. 5000per kg

How much change did she get after paying for all the items?

28. a) Using a pair of compasses, a ruler and a pencil, construct a Rhombus ABCD in which each side is 5cm and angle  $ABC = 60^\circ$ .

b) Measure the length of diagonal BD. \_\_\_\_\_

29. The digits 3, 4 and 5 are used to form three digit numbers.

a) Write down the possibility space for the numbers formed.

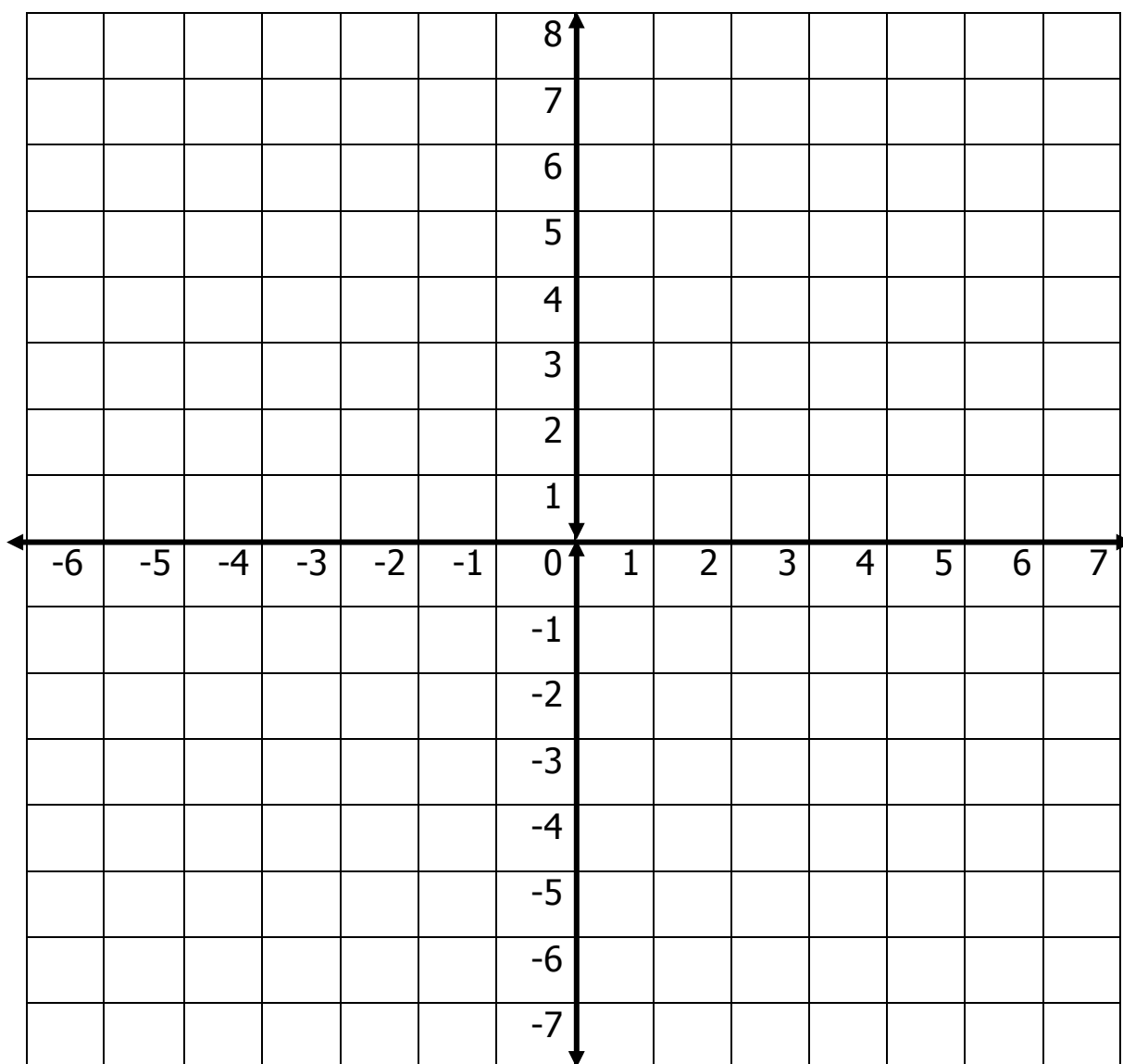
b) Find the probability that the number formed is odd.

30. a) Given that;

$Y = 2x - 5$ , complete the table

X	2	0		5	
Y			3		7

b) Using the above coordinates, plot them on the graph below and join the coordinate points.





31. The table below shows the number of pupils in each class in a school.

P1	P2	P3	P4
30	36	30	24

Draw a pie chart of radius 4cm to represent the above information.

32a) The head teacher of our school got a personal loan of 2400, 000/- from centenary Bank at a rate of 20% per annum. Calculate the simple interest he is supposed to pay after nine months.

b) John and Martha shared 4 apples in a ratio of 3:2 respectively. How many apples did each get?

**END**

**Nerd wishes you a bright future**

