

# EDUCATION SOURCE 2024 EXAMINATION BOARD

## P.7 END OF TERM ONE EXAMINATION SET II

### MATHEMATICS

*Time allowed: 2 hours 30 minutes*

Index No. 

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Candidate's Name \_\_\_\_\_

Candidate's Signature \_\_\_\_\_

School Name: \_\_\_\_\_

District Name: \_\_\_\_\_

Read the following instructions carefully:

1. This paper has **two** sections: **A** and **B**. Section A has 20 Questions and section B has 12 questions. The paper has 15 pages altogether.
2. All the working for both Sections A and B must be shown in the spaces provided.
3. All working must be done using a blue or black ball-point pen or ink. Any work in pencil other than graphs, pictures and diagrams will not be marked.
4. No calculators are allowed in the examination room.
5. Unnecessary changes of work may lead to loss of marks.
6. Any handwriting that cannot easily be read may lead to loss of marks
7. Do not fill anything in the boxes indicated:

**“For Examiners’ Use Only”** and those inside the question paper

FOR EXAMINER'S USE ONLY		
Qn. No	MARK	EXR'S NO
1 – 5		
6 – 10		
11 - 15		
16 – 20		
21 - 22		
23 – 24		
25 – 26		
27 – 28		
29 – 30		
31 - 32		
Total		

## **SECTION A:**

1. Workout:  $52 - 42$

2. Round off 29.99 to the nearest tenths.

3. Using a ruler, pencil and a pair of compasses only construct an angle of  $30^\circ$ .

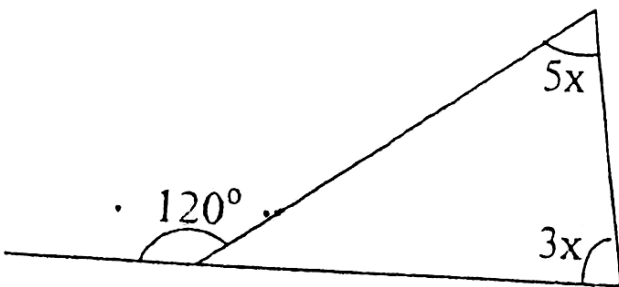
4. Workout:  $2 - \frac{2}{3}$

5. Find the square of 0.09.

6. What is the next number in the sequence; 1, 1, 2, 3, 5, 8, \_\_\_\_

7. Simplify  $8 + 8 \div 8$

8. In the figure find the value of  $x$ .



9. Write 3985 in scientific notation
10. Express 25cm as a percentage of 5m.
11. Write 109 in Roman numerals
12. Express 12:25pm in a 24 hour clock system

13. Simplify:  $2 - 3(p - 2)$

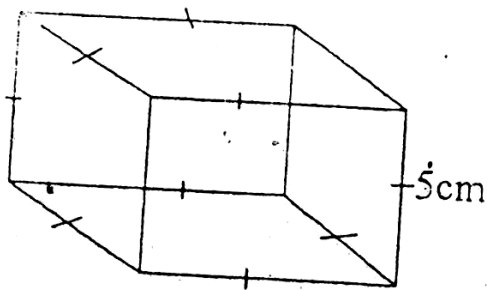
14. Seeta Junior will have a Netball match with Mbuya Parents next week, what is the probability that Seeta Junior will win the match?

15. Solve:  $1 - 3 = w$  (finite)

16. Calculate the number of element in a set with 16 subsets

17. What mathematical property will make the statement  
 $2 + 7 + 8 = 2 + 8 + 7$  correct?

18. Workout the volume of the cube below



19. Workout the mean of  $3p$ ,  $7$ ,  $3$ ,  $2p$  and  $0$ .

20. Write a single numeral that has been expanded to give  
 $(8 \times 10^2) + (3 \times 10^0) + (5 \times 10^{-2})$

### **SECTION B**

21. a) Change  $\frac{1}{4}$  into a decimal fraction.

b) Simplify:  $\frac{0.18 + 1.82}{0.25}$

22. The figure below is representing the magic square of 3 by 3. Study it and find the value of the unknown letters.

8	3	x
p	5	9
t	n	2

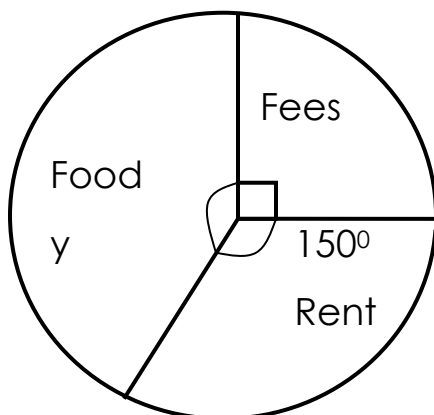
x= \_\_\_\_\_

p= \_\_\_\_\_

t= \_\_\_\_\_

n= \_\_\_\_\_

23. The pie-chart represents Sarah's expenditure per month





a) Find Y

b) Given that Sarah spends sh. 36,000 more on rent than on food. How much does she earn per month?

24. Using a ruler, pencil and a pair of compasses only construct a triangle PQR where  $\overline{PQ} = 7\text{cm}$  Angle P =  $120^\circ$  and angle PQR =  $30^\circ$ .

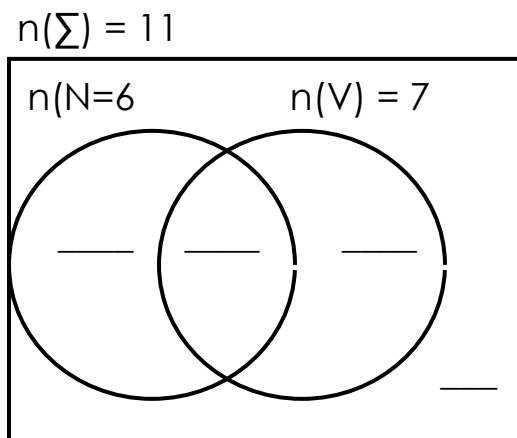
b) Measure angle PRQ\_\_\_\_\_

25. a) Prime factorize 48 using set notation.

b) Workout the sum of prime numbers between 80 and 90.

26. In a family of 11 members 7 play volley ball, 6 play Netball, some members play both games while one person play non of the two games.

a) Complete the venn diagram



b) Find value of y.

c) Workout the probability of picking a member of the family who play on one game.

27. A bus travelling at 80km/hr took 2hrs 30 minutes to cover part of the journey, the rest of the journey was covered in  $1\frac{1}{2}$  hrs at a speed of 120km per hour.

a) What distance did the bus cover altogether?

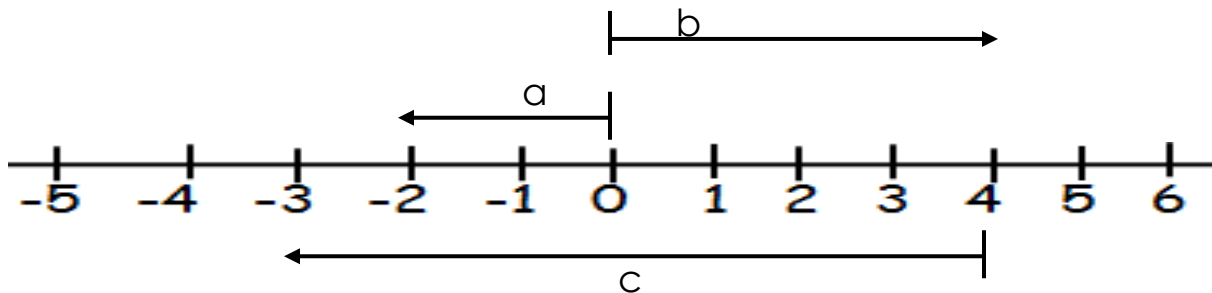
b) Workout the average speed for the whole journey.

28. A girl is 20 years younger than her sister. In 15 years time, the sister will be twice as old as the girl. Work out the age of each person now.

29. a) Find the principle that can yield sh. 7,200 in a bank that gives an interest rate of 20% per year in a period of 6 months.

b) Calculate the amount of money that will be in that account by the end of the period of 6 months.

30. Use the number line below to find the value of the letters.



a= \_\_\_\_\_

b= \_\_\_\_\_

c= \_\_\_\_\_

ii) Write the mathematical sentence represented above

31. Study and complete the table below.

Item	Unit cost	Amount
1 ½ kg of tea	Sh. _____	Sh. 900
2kg of posho	Sh. 3400	Sh. _____
_____ bars of soap	Sh. 1800	Sh. 5,850
750gms of salt	Sh. 2000 per kg	Sh. _____
	<b>Total</b>	<b>Sh. _____</b>

b) If Amina was given sh. 1,450 as balance after paying for all the items, what did she have at first?

32. Jumbo, Tendo and Mambo contributed sh. 24,000, sh, 36,000 and sh. 60,000 respectively for a joint business which made a profit of sh. 51,000 by the end of the business. They then agreed to separate and each of them starts his own and they shared the total money according to their initial contributions. How much did each person get?

END