P.7 MATHEMATICS SET ONE

Time Allowed: 2 Hours 30 Minutes

INDEX NUMBER	EMIS No.						Personal No.		

Candidate's Name..... Stream.....

Candidate's Signature.....

EMIS No. .....

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.
2. Answer **all** questions. **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 fountain pen. Any work done in pencil other than graphs and diagrams will not be marked.
4. No calculators are allowed in the examination room.
5. Unnecessary changes in your 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 table indicated: **"For Examiners' Use Only"** and boxes inside the question paper.

FFOR EXAMINERS' USE ONLY		
Qn. No.	**MARKS**	**EXR'S NO**
1 - 5		
- 10		
- 15		
- 20		
- 22		
- 24		
- 26		
- 28		
- 30		
- 32		
TOTAL		

SECTION A: 40 MARKS

Answer **all** *questions in this section.*
Questions **1** *to* **20** *carry two marks each.*

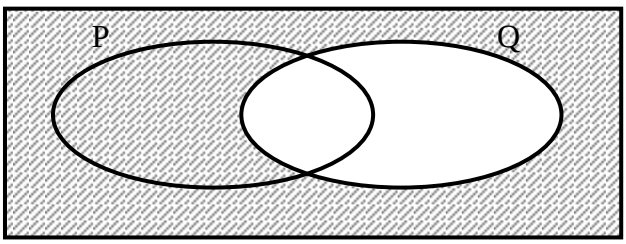
1. Work out: 25 + 52

2. Write in numerals: “Forty thousand, forty”.

3. Simplify: 3a – 5a + 6a

4. Work out: $\frac{3}{4} \div \frac{1}{8}$

5. In the Venn diagram below, describe the un-shaded part.



6. Calculate the complement of 66^0.

7. Given that a = $^{-}2$ and b = 5. Find the value of $a^2 - ab$.

8. Find the mode of 6, 8, 6, 5, 3, 8, 9, and 8.

9. Work out:

Hrs.	Min
2	45
+ 3	55

10. Using a ruler, a pencil and a protractor only, draw an angle of 120^0.

11. Today is Thursday. What day of the week will it be after 20 days?

12. Express $\frac{3}{5}$ as a percentage.

13. Change 13_{ten} into a binary base.

14. Write 34500 in standard form.

15. Arrange 2, $^{-}1$, 3, 0, $^{-}4$ and $^{-}3$ in ascending order.

16. Solve: $3p - 12 = 6$

17. The cost of 4 exercise books is sh. 3,600. Find the cost of six similar exercise books.

18. Express 2.5 km as metres.

19. Find the LCM of 8 and 12.

20. Half of Tracey's age now and a third of Prince's age now add up to 66 years. Prince is 18 years older than Tracey. How old is each of them now?

SECTION B: (60 MARKS)

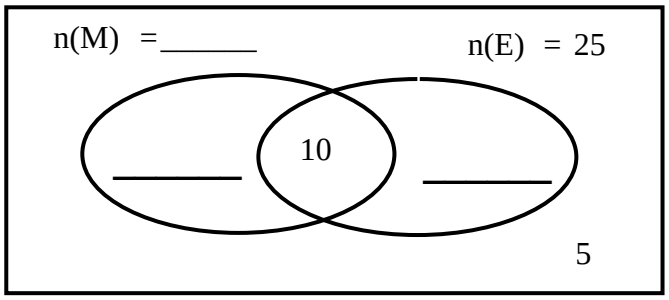
Answer **all** *questions in this section.*

Marks for each part of the question are indicated in the brackets

21. In a class of 50 pupils, "**h"** like Mathematics (M), 25 like English (E), 10 pupils like both subjects while 5 pupils do not like any of the two subjects.

a) Complete the Venn diagram below. *(3marks)*

$n(\varepsilon)= 50$



b) Find the value of h. *(2marks)*

c) How many pupils like only one drink? *(1mark)*

22. a) Solve for p: $3(2p + 2) – 2(p – 4) = 22$ *(2 marks)*

b) Chris is 2 years younger than Ann and twice as old as Charles' age. If their total age 4 years ago was 15 years, how old is Chris now? *(2 marks)*

23. The sum of 3 consecutive counting numbers is 93. Find the numbers.*(4 marks)*

24. a) Using a ruler and a pair of compasses only, construct a rectangle PQRS in which PQ = 8 cm and QR = 6 cm. *(3marks)*

b). Measure the diagonal PR……. *(1mark)*

25. The table below shows the marks scored by pupils in a mathematics test.

Marks scored	80	70	90	60
Number of pupils	2	3	1	4

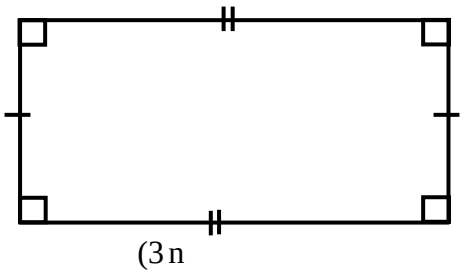
a) How many pupils sat for the test? *(2marks)*

b) Find the mode. *(1mark)*

c) Calculate the mean mark? *(2marks)*

26. Study the diagram below and use it to answer the questions that follow.

(n + 8) cm



a) Find the value of n. *(2 marks)*

b) Work out the area of the shaded part. *(2 marks)*

c) Calculate its perimeter. *(2 marks)*

27. Mutoni went to the market and bought the items as shown on the table below.

Item	**Quantity**	**Unit price**	**Total cost**
Sugar	2 kg	Sh. 3,500 per kg	Sh**.** _____
Meat	_____kg	Sh. 8,000 per kg	Sh. 24,000
Milk	$2\frac{1}{2}$litres	Sh. 1,200 each litre	Sh**.** _____
Bread	4 loaves	Sh**.** _____ @ loaf	Sh. 8,000
	Total expenditure		Sh**.** _____

(a)Complete the table above. *(5 marks)*

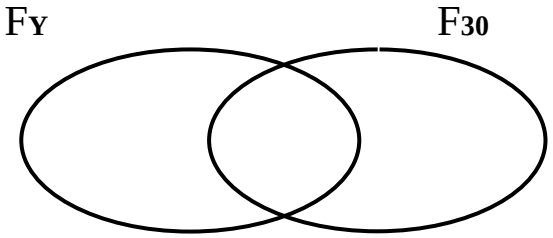
a) If she went with sh. 50,000, find her change. *(1 mark)*

28.a) Work out: $\frac{0.24 + 1.2}{0.4 \times 0.3}$ *(3 marks)*

b). Simplify: $\frac{1}{4} - \frac{1}{2} + \frac{1}{3}$ *(2 marks)*

29. Given that $F_{30} = \{2_1, 3_1, 5_1\}$ and $F_Y = \{2_1, 2_2, 3_1, 3_2\}$. Use this information to answer the questions that follow.

a) Represent the above information on the Venn diagram below. *(3 marks)*



b) Find the value of Y. *(2 marks)*

c) Work out the G.C.F of Y and 30. *(1 marks)*

30. John, Fatuma and Daniel shared a certain amount of money in the ratio of 2: 5: 3 respectively. If Daniel got sh. 90,000;

a) How much money did they share altogether? *(4 marks)*

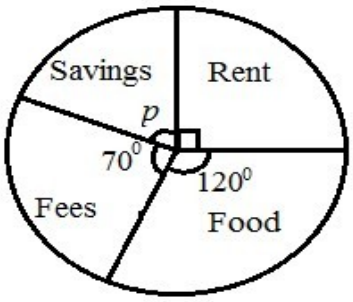
b) How much more money did Fatuma get than John? *(1 marks)*

31. A motorist left Kampala for Jinja at 9: 50 pm travelling at an average speed of 60 km/ hr. He reached Jinja at 11: 20 pm.

a) How long did he take to travel from Kampala to Jinja? *(2 marks)*

b) Calculate the distance between Kampala and Jinja. *(2 marks)*

32. The pie-chart below shows Muzorewa's monthly expenditure. Use it to answer the questions that follow.



a) Find the value of *p* in degrees. *(3 marks)*

b) If he spends sh. 280,000 on fees, find his monthly expenditure. *(2 marks)*

END