MOTHERCARE PREPARATORY SCHOOLS

MATHEMATICS

NAME: _____ STREAM: _____

Read the following instructions carefully

1. The paper has **two** sections: **A** and **B**.
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 fountain pen. Diagrams must be drawn in pencil.
4. Unnecessary changes of work may lead to loss of marks.
5. Any handwriting that cannot easily be read may lead to loss of marks.
6. Do not fill anything in boxes indicated: **"For Examiners' Use Only"** and those inside the question paper.

FOR EXAMINERS' USE ONLY		
Qn. No.	MARKS	EXRS' NO
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)

1. Work out: 3x7 Using repeated addition.

2. What number has been expanded below?
   $200 + 40 + 5$

3. Write 45 in Roman numerals

4. Given that set P={1, 2,3,4} and set Q={3,4,5,6,7}, find set $P \cap Q$

5. Round off 154 to the nearest tens

6. Find the complement of 40^0

7. A pupil bought 3 exercise books for sh.1800. How much did pay for 5 similar exercise books?

8. Simplify: $4t + 5k - 2t$

9. Divide 15 by 3 Using long division.

10. Workout: $\frac{2}{3} + \frac{1}{4}$

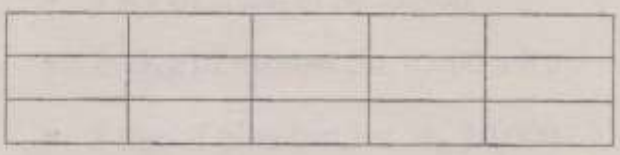
11. An examination started at 10:30am and ended at 11:40am. How long did the lesson last?

12. Simplify: $^{+}4 - {}^{+}6$

13. In the space below, draw an angle of 70^0 using a pencil, protractor and a ruler.

14. Work out: 2 – 6 =.....(finite 6)

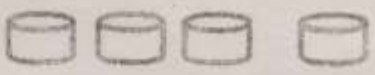
15. Shade $\frac{2}{3}$ of the figure below



16. Find the LCM of 9 and 6

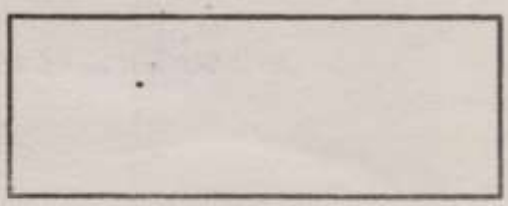
17. How many $\frac{1}{2}$ litre bottles of water are contained in a 10 litre jerrycan.

18. If  represents 10 cups, how many cups are represented by



19. Change 213_{five} to base ten.

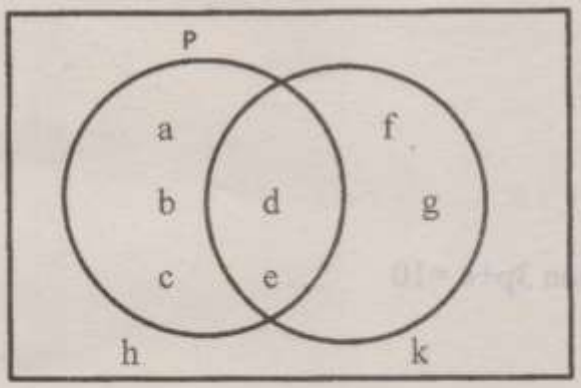
20. How many lines of folding symmetry has the figure below?



SECTION B (60 MARKS)

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

$n(\varepsilon) =$



a) List all the elements of set P (2marks)

b) Find n(P-Q) (2marks)

c) Find the n(Ɛ) (2marks)

22. Peter scored the following marks in end of term examinations
70, 85, 80, 85 and 75.

a) Find his modal mark. (1mark)

b) Calculate the median score. (2marks)

c) Workout his mean score (2marks)

23. Given that a=4, b =5 and c = 3.

a) Find the value of a+b+c (1 mark)

b) Workout 3b-2c (2marks)

c) Solve the equation 3p+4 =10 (2marks)

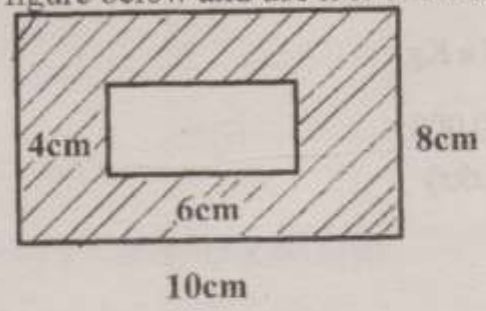
24. In a class of 240 pupils, $\frac{2}{3}$ are girls and the rest are boys.

a) Find the fraction of boys. (1mark)

b) Find the number of girls (2marks)

c) How many more girls than boys are there in the class. (2marks)

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



a) Find the area of the outer figure. (2marks)

b) Find the area of the inner figure. (2marks)

c) Find the area of the shaded part. (2marks)

26.a) Using a pair of compasses , a sharp pencil and a ruler only, construct a regular hexagon whose sides are 3cm. (3marks)

b) Find its perimeter. (1mark)

27 Allan went to Shoprite and bought the following items.

- 3 Kg of sugar at Sh. 3,500
- $1\frac{1}{2}$ Kg of meat at Sh. 6,000 a Kg .
- 5 tins of blue band at Sh. 10,000

a) Find his total expenditure. (4marks)

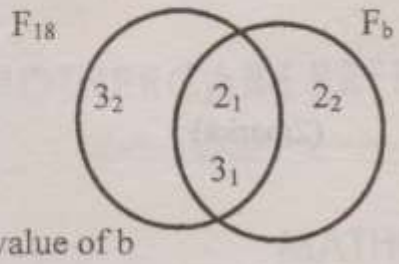
b) If he had gone with a fifty thousand shilling note , calculate his change .(1mark)

28 a) Workout : 213_{five} (2marks)

$+ 143_{five}$

c) Express 58_{ten} to base five. (3marks)

29 Study the Venn diagram below and answer questions that follow.



a) Find the value of b (2marks)

b) Calculate the GCF of 18 and b . (2marks)

c) Find the LCM of 18 and b. (2marks)

30. Given the digits 5, 0 and 3.

a) Form the smallest 3 digit number. (1mark)

b) Form the biggest 3 digit number. (1mark)

c) Work out the sum of the smallest and biggest numbers formed (2marks)

31 a) Change $2\frac{1}{2}$ hours to minutes . (2marks)

b) Add : (2marks)

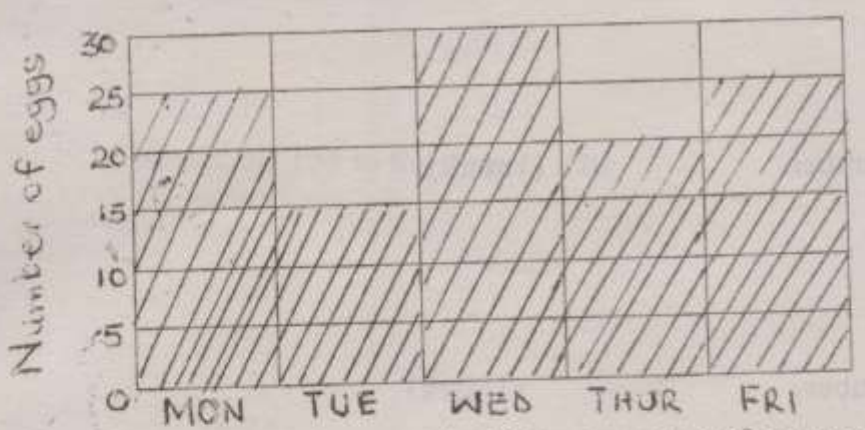
Hrs	Mins
2	40
+3	35

(2marks)

C) Subtract :

Weeks	Days
5	3
-2	5

30 Use the bar graph below to answer questions that follow



a) On which day was the highest number of eggs collected? (1mark)

b) On which day was the least number of eggs collected (1mark)

c) Calculate the mean number of eggs collected in 5 days. (2marks)