

Mathematics

PMA

06 Nov. 2012 09.00am-11.00 am

Pupil's complete index number

Province/City	District	Sector	School	Pupil

Pupil's names

Surname:

Other Names:

REPUBLIC OF RWANDA



RWANDA EDUCATION BOARD (REB)

PRIMARY LEAVING NATIONAL EXAMINATION

NOVEMBER 2012

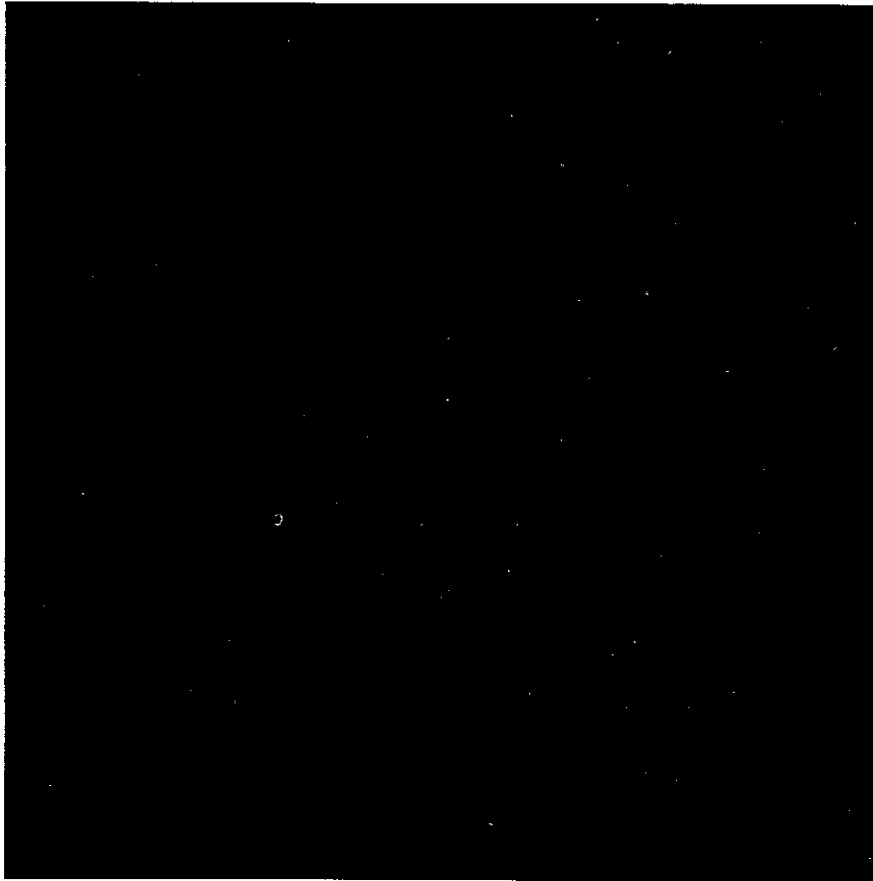
MATHEMATICS

Duration: Two hours

Marks: /100

INSTRUCTIONS

- *This paper contains 35 questions and 16 pages. Before starting, verify if all pages and all questions are there and are arranged in order.*
- **In the space provided, write your index number and names in full as written on your registration form.**
- Answer **ALL** questions in this paper.
- Read each question carefully before answering it.
- Answer the questions in the space provided on this question paper.
- Show your working clearly. No marks will be given when all steps are not shown.
- You must use a blue pen, a ruler, a pencil and a pair of compass only.
- **DO NOT USE A CALCULATOR.**



ANSWER ALL QUESTIONS IN THIS PAPER.

(100 marks)

Do rough work below each question	Write your final answer in this column
1. Find the next two numbers in the following sequence: 4, 7, 10, ..., ... (2)	
2. Calculate: $340 \times 4 \div 170 \times 4$. (2)	
3. Find the area of a square whose perimeter is 20 cm. (2)	
4. Simplify: $\frac{1}{3} + \frac{1}{4} + \frac{5}{12}$. (2)	

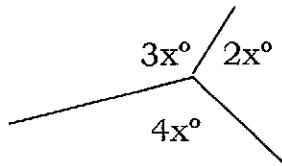
5. Share 7000Frw between two students in the ratio 2: 5. (2)	
6. Express 140 as a product of its prime factors. (2)	
7. Arrange the following in ascending order: $\frac{2}{5}$, $\frac{1}{3}$, $\frac{3}{7}$. (2)	

8. Calculate the area of a parallelogram whose length is 10 cm, height is 4 cm and width is 6 cm. (2)	
9. The cost of petrol was increased by 2% per litre. Find the new price of 1 litre of petrol if the old price was 990 Frw. (2)	
10. Solve the equation: $2x + 4 = 8 - 2x$. (2)	

11. The perimeter of a rectangle is 36 cm. Find its area if the width is 6 cm. (2)	
12. Add and give the answer in base two: $1011_{\text{two}} + 5_{\text{ten}}$. (2)	
13. Set A = {2, 3, 5, 7, 11}, Set B = {10, 5, 2, 4}. Find (a) $A \cup B$. (1) (b) $A \cap B$. (1)	

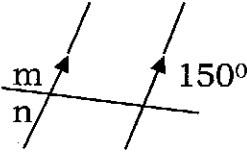
14. Find the value of x in the figure below.

(2)



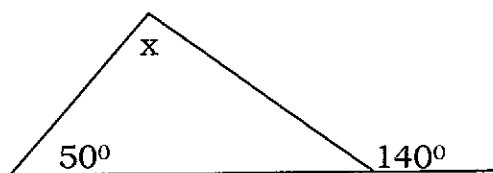
15. Find the area of a semicircle whose diameter is 0.14 dm. ($\pi = \frac{22}{7}$.) (2)

16. A taxi starts from Kigali at 8.05 a.m and travels at an average speed of 60 km/h until 9.00 a.m.
What distance has the taxi travelled? (2)

17. In the figure below find (a) m. (1) (b) n. (1) 	
18. Write a pair of (a) complementary angles. (1) (b) supplementary angles. (1)	
19. There is enough food for 3 people for 12 days. How many days would this food last if there were 9 people? (2)	

20. The base of a right angled triangle is 8 cm and the hypotenuse is 10 cm. Find the height of the triangle. (2)

21. Find angle x in the figure below? (2)



22. Draw an angle of 60° at point A on the line below. Use a ruler, a pair of compass and a pencil only. (2)



23. A shirt was sold at 20% loss for 8000 Frw. What was the cost price? (2)	
24. How many lines of symmetry does (a) a rhombus have? (1) (b) an isosceles triangle have ? (1)	
25. The cost of a book is 5000 Frw. How many books can be bought with 24000 Frw? (2)	

26. Given that $x = -2$, $y = 3$, find the value of $2x^2 + xy - x$. (3)	
27. The perimeter of the base of a cylinder is 31.4 cm. Find the volume of the cylinder if the height is 10 cm. ($\pi=3.14$) (3)	
28. An interior angle of a polygon is 150°. How many sides does the polygon have? (3)	

29. A man spends $\frac{1}{8}$ of his salary on fees, $\frac{2}{5}$ of the salary on a car loan. He remains with 380000 Frw. What is the man's salary? (3)	
30. A pie chart represents goats, cows and pigs on a farm. The angle representing pigs on the pie chart is 45°. There are 40 pigs and 120 cows on the farm. How many goats are there on the farm? (3)	

31. Kigali is 50 km from RWAMAGANA.
A car leaves KIGALI for RWAMAGANA
at 7. 30 am and travels at an
average speed of 45 km/h.
At the same time a taxi leaves
RWAMAGANA for KIGALI and travels
at an average speed of 30 km/h.

- (a) Find the distance from KIGALI
where the two vehicles meet. **(5)**
- (b) At what time do the two vehicles
meet? **(2)**

32. Use quick method to calculate:

(a) $642 \times 50.$ **(2)**

(b) $2224 \times 49.$ **(2)**

(c) $16999 \times 99.$ **(2)**

(d) $4444 \times 25.$ **(1)**

33. The table below shows the results of football matches played by a school football team.

Number of goals scored	0	1	2	3	4
Number of matches played	3	2	2	3	0

Calculate the mean number of goals per match.

(7)

Number of goals x	Frequency f	fx
0		
1		
2		
3		
4		
Total		

Mean goals per match =

34. 90 000Frw is kept at 10% p.a compound interest.
Find the amount kept after 3 years. (7)

35. The information shows two types of beans and their costs per kilogram.

Type	Quantity	Cost per kilogram
A	300 kg	300 Frw
B	X kg	400 Frw

What is the value of X which would make the cost of one kilogram of the mixture 340Frw? (7)

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