

Mathematics

PMA

26 Oct. 2010 9.00 am – 11.00 am

RWANDA NATIONAL EXAMINATIONS COUNCIL



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Pupil's complete index number

<i>Province/City</i>	<i>District</i>	<i>Sector</i>	<i>School</i>	<i>Pupil</i>
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PRIMARY LEAVING NATIONAL EXAMINATION

October 2010

MATHEMATICS

Time: Two hours

Marks :

Instructions

This paper has two sections **A** and **B**.

SECTION A: Answer **all** questions. **(65 marks)**

SECTION B: Answer only **five** questions. **(35 marks)**

Write your index number in the space provided on your question paper.

Read each question carefully before answering it.

All rough work should be done in the space provided on your question paper.

Show neatly your work in the space provided on your question paper.

Do not use calculators or any other calculating device.

You need a pair of compasses, a ruler, a protractor, a rubber and a pencil.

SECTION A: Answer all questions. (65 marks)

1. Calculate: $55 \times 112 - 12 \times 55$. (2)	
2. What is the place value of 4 in 85421? (2)	
3. Arrange the following numbers from the smallest to the largest: 0, -1, -8, 11, 17. (2)	
4. Calculate 0.031×1.1 giving the answer corrected to 2 decimal places. (2)	

5. Complete: 0.4 litre = cm^3 . (2)	
6. Write the next two numbers in the following sequence: 2, 8, 14,,	
7. A car uses 4 litres of petrol to travel 60km. How many km will it travel if it uses 16 litres? (2)	
8. Find the Lowest Common Multiple of 15, 24 and 40. (2)	

9. Express 48 in terms of its prime numbers. (2)	
10. Solve the equation: $4(x + 1) = 2x + 7$. (2)	
11. Increase 240 kg by 9%. (2)	
12. Find the perimeter of a square whose area is 625 cm^2 . (2)	

13. Complete the table below.

(2)

4	6	7	
9	13		25

14. In a sale, goods are sold for $\frac{3}{4}$ of the usual price.

(2)

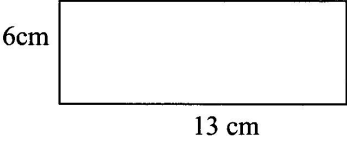
What is the sale price for a pair of shorts whose usual price is 2000 frw?

15. Simplify: $4x^4y^3 \times 2x^2y^2$.

(2)

<p>16. To make one cake you use 1.25 kg of flour. How many kg of flour will be used to make 6 cakes? (2)</p>	
<p>17. Find the circumference of the circle with the diameter 30 cm and $\pi = 3.14$. (2)</p>	
<p>18. Decrease 150 m in the ratio 3:25. (2)</p>	

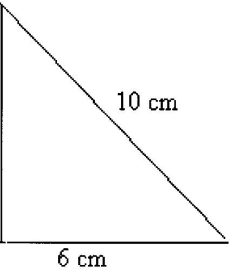
<p>19. Ten men can dig a garden in 4 days. (2) How many days would it take eight men to dig the same garden?</p>	
<p>20. The angles of a triangle are 80°, 30° and x°. (2) Find the value of x°.</p>	
<p>21. 1, 200,000 frw is banked at 8% per year simple interest. Find the interest after 3 years. (2)</p>	

22. Write 45 in Roman numerals. (2)	
23. Calculate the area of the rectangle below: (2)  <p>A diagram of a rectangle. The left vertical side is labeled "6cm". The bottom horizontal side is labeled "13 cm".</p>	
24. $45 \text{ kg} + 65 \text{ g} + 1000 \text{ mg} = \dots\dots\dots\text{g}$. (2)	
25. The base area of a cube is 64 cm^2 . Calculate the volume of that cube. (2)	

<p>26. If the cost price of a goat is 5000 frw and the selling price of the same goat is 6000 frw. What is the percentage profit? (3)</p>	
<p>27. If the average of 12, X and 8 is 9 . What is the value of X . (3)</p>	
<p>28. If car travels 45 km in 50 minutes. How many km does it travel in 2 hours? (3)</p>	

<p>29. Simplify : $(\sqrt{64} - \sqrt{25}) \div \sqrt{9}$ (3)</p>	
<p>30. The following are the ages of 10 pupils: 11, 12, 12, 13, 11, 14, 15, 11, 12, 11. (3) Find the (a) mode age. (b) the average age .</p>	

SECTION B: Answer only five questions. (35 marks)

<p>31. A trader banks 1,000,000 frw at a compound interest of 6% per year. Find the amount of money after 3 years. (7)</p>	
<p>32. The figure below is a right angled triangle. Find its area. (7) Area=</p>  <p>The diagram shows a right-angled triangle. The horizontal base is labeled '6 cm'. The hypotenuse is labeled '10 cm'. The right angle is at the bottom-left corner.</p>	

33. The base of triangular prism is a right angled triangle. The base of the triangle is 4 cm and height is 3 cm. (7)
Find the height of the prism if its volume is 48 cm^3 .
Calculate the total surface area of the prism.

<p>34. (a) If 20 kg of beans mixed with maize contains 8 kg of beans, How many kilograms of maize will be found in 35 kg of maize mixed with beans? (4)</p> <p>(b) 50 children have enough food for 18 days. How long would this food last if the number of pupils was 30 ? (3)</p>	
<p>35. (a) Solve $\frac{2(2x-1)}{3} = \frac{3(x+3)}{2}$ (4)</p> <p>(b) If $m = -2$, $n = 3$ and $p = 5$, find the value of $2m^2 - 3n + 2p$. (3)</p>	

36. Using a ruler and a pair of compasses only, (7)
draw a triangle ABC in which $\overline{AB} = 6.2$ cm,
 $\overline{BC} = 5.0$ cm and angle $ABC = 60^\circ$.
Measure using a protractor
- (a) angle BCA and angle BAC .
 - (b) Length AC .

37. Use the table below and plot a graph of y against x .

(7)

x	1	2	3	4	5
y	2	4	6	8	10

