**REPUBLIC OF RWANDA TERM III 2020-2021**

**MINISTRY OF EDUCATION**

**SOUTHERN PROVINCE DATE:**

**RUHANGO DISTRICT DURATION: 2 HOURS**

PRIMARY SIX MATHEMATICS EXAMINATION/100 Marks

Index Number:

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Pupil’s names: …………………………………………………… Class: ………………

INSTRUCTIONS:

1. All 39 questions are compulsory.
2. Read each question carefully before answering it.
3. Answer all questions in provided space of the booklet.
4. Avoid unnecessary work; this lead to loss of marks.
5. Use blue or black pen and give legible answers.

|  |  |
| --- | --- |
| **Do rough work in this column** | **Show your answers in this column.** |
| 1. Write the number in words (2)

48 005 206 |  |
| 1. What is the place value of underlined digits? (2)

438.598 |  |
| 1. Express 120 as a product of its prime factors. (2)
 |  |
| 1. Calculate:a) $\frac{3}{7}$ of 21 (1)

 b) $\sqrt{25}+2^{2}$ (1) |  |
| 1. Round off: (2)

69437.901 to the nearest whole number. |  |
| 1. Work out: (2)

15 337 sec =… …hr.……..min…….sec |  |
| 1. Subtract 37.91 from 1000. (1)
 |  |
| 1. Find the lowest number that can be formed using the digits below:

2, 8, 3, 9, 1 (1) |  |
| 1. C0nvert$\frac{291}{14}$ as mixed fraction (2)
 |  |
| 1. Simplify: 2($3x-4)-2\left(x+4\right)=$ (2)
 |  |
| 1. Write in short form: (2)$4x^{4}y^{3}$x $2x^{2}y^{2}$=
 |  |
| 1. Write “ Eight hundred eighty eight million, eight hundred eighty eight thousand, eight hundred eighty eight” as figure form. (2)
 |  |
| 1. The actual length of a certain road is 300km.O n a map it is represented by 30 cm. What scale has been used? (2)
 |  |
| 1. Filling the missing numbers in the table below.

 (2)

|  |  |  |  |
| --- | --- | --- | --- |
| 4 | 7 | 6 | . |
| 9 | . | 13 | 21 |

 |  |
| 1. Two supplementary angles are X +400 and 800 . Find the size of X. (2)
 |  |
| 1. If a=2, b=3, c=0 (2)

Find 3ab-bc+6a |  |
| 1. Musa sold a trousers at 7500 Frw making a loss of 500 Frw . Find the percentage loss. (2)

 (2) |  |
| 1. Simplify: (2)
2. $2^{3}$**+**$3^{2}$
3. $1^{3}+3^{0}+3^{2}$
 |  |
| 1. The LCM of two numbers is 30. One of the number is 10. If the GCF is 5, find the second number. (2)
 |  |
| 1. a) The simple interest on a capital of 800 000 Frw after 3 years is 12 000 Frw.

Find the interest rate per year. (2) |  |
| 1. Convert: 72 km/hr to m/sec (2)
 |  |
| 1. The salary of Mbabazi was 17 400 Frw ; it was increased in a ratio of 6 to 5 ;

Find her new salary. (2) |  |
| 1. Match 12- hr format to 24-hr format.

 (2)a) 12:45 i) 12:45 p.mb) 07:30 ii) 9:15 p.mc) 21:15 iii) 4:20 p.md) 16:20 iv) 7:30 p.m |  |
| 1. Find the bearing of town A from town B using clockwise side. (1)

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| 1. Simplify completely: (2)

$(\frac{4}{15}$**:**$\frac{8}{45}$**) + (**$\frac{5}{7}$**x**$\frac{14}{15}$**)** |  |
| 26 .Peter got 28 out of 40 marks in English test.Express his marks as percentage. (2 |  |
| **27.**Find the volume of the figure below:(3) 14 cm10 cm |  |
| 28Find the 3 number sequences for the general rules below: (3)2n + 3 |  |
| 29 .Find the volume of firewood in a stack measuring 3m by 2 m to 3m in desteres (dst). (3) |  |
| 30Work out: (2)1. +5 x -2=
2. -16 : -8=
 |  |
| 31The figure below is an irregular polygon. Find the size of each angle. (6)**C:\Users\Teacher\Desktop\Capture d.PNG** |  |
| 1. .Calculate the length of side marked by the letter **b** and its area. (3)

**b** 10 cm 6Cm |  |
| 33 .a) Which of these numbers is not a probability? (3)-0.001; 0; 0.5; 4b) Discuss the likelihood of the following eventsi) I was born yesterday.ii) The sun will rise tomorrow. |  |
| 34.Tom and Mary shared some money ;Mary got $\frac{3}{11}$ of it . How much did Mary get if Tom got 50 352 Frw. (3) |  |
| 1. **.**The following are ages of pupils in primary six class.

11, 12, 13, 11, 12, 14, 11, 12, 13,111. Complete the table below: (2)

|  |  |
| --- | --- |
| Age | Frequency |
| 11 |  |
| 12 |  |
| 13 |  |
| 14 |  |
| Total |  |

1. What is the mode age?(1)
2. Calculate the average age? (2)
3. Find the range. (1)
 |  |
| 1. .A car travelling at 40 km/hr left town A at 8:00 a.m. Another car travelling at 60 km/hr followed after 1 hr. When did the second car overtake the first car? (4)
 |  |
| 1. Find the value of angles marked with the letters. (3)

 a 700e  b c df 12001. Mary has 80 l of mixed honey and sells each litre at 1000. If there are 30 l of the first type which cost 1200 Frw per litre, find the price of one litre of the second type. (5)
 |  |
| 1. Calculate the total surface area and volume. (4)

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|  |  |
|  |  |

 **Good Luck!!!!!!!!!!**

MARKING GUIDE FOR P6 MATHEMATICS EXAMINATION

1. Forty-eight million, five thousand two hundred six.
2. 4 is hundreds 5 is tenths.
3.

|  |  |
| --- | --- |
| 120 | 2 |
|  60 | 2 |
| 30 | 2 |
| 15 | 3 |
| 5 | 5 |
| 1 |  |

 120 = 23 x 3 x 5

1. a) $\frac{3}{7}$ x 21 = 9

b)5 + 4 = 9

1. 69438

**6.** 4 hr 15 min 37 sec

**7.** 962.09

**8.** 12 389

**9. 20**$\frac{11}{14}$

10. $x=4$

11. $8x^{6}y^{5}$

12. 888 888 888

13.$\frac{1}{1 000 000}$

14.

|  |  |  |  |
| --- | --- | --- | --- |
| 4 | 7 | 6 | **10** |
| 9 | **15** | 13 | 21 |

15. X =600

16. (3x2x3) – (3x0) + (6x2) = 30

17. % loss =6 ¼ % or 6.25%

18. a) (2x2x2) + (3x3) = 17

 b) (1x1x1) + 1 + (3x3) = 11

19. 10 $×x=30×5$

 $x=\frac{150}{10}$

 $x=15$

20. ½% or 0.5%

21. 20 m/sec

22. 20 880 F

23. a i

 b iv

 c ii

 d iii

24. 1350

25. 70%

26. S= 5 cm

Area= 25 cm2

27. R= D: 2= 7 cm

 V= 1540 cm3

28. 5; 7; 9

29. 18m3 =180 dst

30. -10 +2

Sum of interior angles = (n-2) x 1800

 $12x+60°=540°$

 $x=40°$

1st = 800  2nd = 1240 3rd = 910 4th = 1140  5th = 1310

32. b = 8 cm Area = 24cm2

33. a) -0.001; 4

 b) i) Impossible

 ii) Certain

34. 18 882 F

35.

|  |  |
| --- | --- |
| Age | Frequency |
| 11 | 4 |
| 12 | 3 |
| 13 | 2 |
| 14 | 1 |
| Total | 10 |

Mode= 11 average= $\frac{120}{10}$= 12

Range= 14 – 11= 3

36. Difference speed= 60 km/h – 40 km/h= 20 km/h

 1st car had covered = 40 km/h

The time taken to catch up 40 km: 20 km/h= 2 h

The second car will overtake 9: 00 +2: 00= 11: 00 a.m

37. c= 700 e= 1200- 700= 500 b= 500 d= 600 f= 600+ 700= 1300

 a= 1800-( 700=500) = 600

38. Mixed honey cost= 80 x 1000= 80 000 F

 The cost of 1st type= 30x 1200= 36000 F

 The cost of the second type= 80 000 – 36000 = 44 000F

 Capacity of the 2nd type= 80l – 30l = 50l

The cost of 1l of the 2nd type = 44 000: 50= 880 F

39. TSA= 2(LXW) + 2(LXH) + 2(WXH)

 =96+ 168+ 56 = 320 cm2

V= LXWXH= 12 cm x 7 cm x 4 cm= 336 cm3