**NORTHERN PROVINCE JETS ASSOCIATION**

**JUNIOR MATHEMATICS**

**QUIZ - 2012**

1. Write in expanded form 2118-14
2. What is the value of the square root of 0.01
3. The area of a circle is 81 cm2. . The circumference in cm in terms of pie (π)
4. The elements of set A intersected to the elements of its compliment is equal to:
5. The result of subtracting 89 from negative 89 is…
6. Find the LCM of 2x,y and 4
7. On Monday, Mubita withdrew K15,000 from her savings account. On Wednesday, she deposited K40,000 into the same account. She now has K100,000. How much was in her account on Monday before she withdrew the money?
8. John got 16 marks out of 25 in a mathematics test. What percentage did he get in the test?
9. From the word MATHEMATICS the modal letter is ….
10. If the mean of 8 numbers is 40, then the sum of the numbers is …
11. Each interior angle of the regular polygon is 1200m. Find the number of sides that this polygon has.
12. The angles of$$ a triangle are in a ratio 1:2:3, Calculate the size of the largest angle.
13. Change the number $110\_{3}$ into a number in base 10
14. What do we call a comparison between two or more similar quantities?
15. Factorise a(x + y) + b(x + y)
16. Find the exact value of 1004 ÷ 1003
17. Find the slope of the equation; 6 – 2y = -4x
18. Find the median of the prime numbers between 10 and 35.
19. Name a 12 sided regular polygon.
20. A triangle has sides of length 10cm, 10cm and 16cm. What is the area?
21. A pencil was bought at K400 and later sold at K200. What is the loss percentage?
22. Angle A and B are supplementary angles. If angle A is 780. What is the size of angle B?
23. Convert 100 cm / min to m / h
24. Find the positive square root of 2 $\frac{1}{4}$,
25. The mean of numbers 7, 8, 6, 10 and x is 7. Find the value of x.
26. Simplify $\frac{3x^{2}- 27}{\left(x+3\right)(x-3)}$
27. Express 5398.5 in standard form correct to three significant figures.
28. Find the positive value of $\sqrt{x+6} =x^{2}$
29. An aircraft travelled a distance of 9 km at an average speed of 27km / h. How long does the journey take?
30. A white light flashes after 6 min, a blue light flashes after 10 min and an orange one after 15 min. If they all start at the same time will they all flash at the same time again?
31. If x = $\frac{x+5}{b}$, make x the subject of the formula.
32. $ $Solve for x in the equation 3(x + 1) = 2x
33. The area of a circle is 616cm2
34. If x = 2 $\frac{1}{5}$ and y = $\frac{2}{5}$ , find the value of $\frac{x}{y}$
35. Find the value of $\frac{x+5}{b}$
36. Find the exact value of $\frac{0.024}{0.06}$
37. In a grade 9 class, the ratio of boys to girls is 9:7. If there are 21 girls, find the total number of pupils in the class.
38. Solve the inequality 1- 2x ≥11
39. How many lines of symmetry has a kite?
40. The angles in an Issocelles triangle are 2x, x + 20, and x+ 20. Find the value of x
41. Find the two possible values of the square root of 36
42. Find the difference between the of 60º and the complement of 40º
43. What is the product of the numbers 1 to 5 ?
44. What is the sum of interior angles in a pentagon?
45. What is the product of the 4th and the 9th even number?
46. I am the only 2 digit number which is both a square number and a cube number. What number am I?
47. I am a square number and both my digits are square numbers. What numbers am I?
48. How many seconds are there in a week?
49. What does the formula A = $\frac{1}{2}h(a+b)$ used to calculate the area for?
50. There were 365 days in a year 1993. The first day of the year was Friday. On what day of the week did 1994 begin?
51. Chishala was given K18,500=00 for $3.70. How much kwacha will he get for one dollar?
52. From the prime numbers between 1 and 10, find the difference between the largest and smallest prime number.
53. A letter is selected from the word COMPANION. Find the probability that the letter is a vowel.
54. Find the value of $(-3)^{3}$
55. What is the mean word length in this sentence? MATHS COMPETITIONS ARE GOOD
56. Find the value of $\sqrt{0.0081}$
57. Find the value of $9^{\frac{3}{2}}$
58. In a restaurant, prices were reduced by 30%. After the reduction, a meal of chicken and rice cost K28,000=00. Calculate the cost the meal before the reduction.
59. Express 1m2 in terms of cm2.
60. How many subsets can be formed in the word MATHEMATICS?
61. Find the value of $3^{2}+\sqrt{25}$
62. Set A has 32 subsets. How many elements are in set A?
63. If 8 school girls can clean the staff room in 15 minute. How many girls would be needed to clean the same staff room in 5 minutes?
64. A video cassette recorder costs K200,000=00. How much would you pay if a discount of 8% is allowed?
65. Find the fraction which is half way between $\frac{1}{3}$ and $\frac{2}{5}$.
66. Express $\frac{1}{2} : \frac{1}{3} : \frac{2}{5}$ as a ratio in its simplest form.
67. I am the only one digit number which is both even and prime. What number am I?
68. Find the value of $16^{\frac{1}{4}}$
69. Find the value -5 ˂ 2x + 3 ˂ 1
70. Marbles cost 12 ngwee each. John has a K6.00. How many marbles can he buy?
71. How many degrees difference is there between $13^{0 }C and -15^{0}C$
72. Ann is 5 years older than Mary. If the sum of their ages is 51. Find the age of each of them.
73. Find the value of $\left(0.04\right)^{2}$
74. Find the value of $-5^{2}$
75. Express 0.125 as a fraction in its lowest term
76. Two angles A and B are supplementary. Find angle A if B is $35^{0}$
77. Find the value of this expression; $\sqrt{36}$ – 3
78. Find the value of 4 + 2 X 3 – 3
79. Find the volume of a cube whose sides are x cm long.
80. How many kilogrammes are in one tone? (one attempt)
81. If the angle of elevation is $70^{0}$ . What is the angle of depression? (one attempt)
82. How many degrees are there in $^{1}/\_{3} $ of a revolution?
83. Simplify $\frac{42x^{5}y^{2}}{-6x^{8}y^{4}}$
84. Calculate the value of $403\_{five}$ x $3\_{five}$ in base five.
85. Find the sum of interior angles of the regular polygon with six sides.
86. During a Christmas festival all prices in Shoprite were increased by 20%.What will be the price of an exercise book at K25 000?
87. Calculate the size of the exterior angle of a regular 10 sided polygon.
88. Find the mid-point of a line with co-ordinates (2,4) and (6,2).
89. When five is added to a number and the result is divided by 4 the answer is 3.Find the number.
90. A TV programme started at 23:45hours and finished at 04:20hours the following day. How long did the programme last?
91. Find the product of second and sixth triangular numbers.
92. Find the sum of the first six prime numbers.
93. Express 24 as a product of its prime factors.
94. Calculate the value of $9^{\frac{1}{2}}$+$9^{0}$
95. What is the difference between the largest and smallest numbers that can be written from 3,7,4,9?
96. Write down the following numbers in order of size starting with the smallest. – 0.29, - 1.5, 0, - 0.3 and – 4
97. Find the value of ( ⅝)º
98. Given that p = 4 and q = - 3, Evaluate 2p - q²
99. Factorise completely 51x²y – 17 xy²
100. The temperature in a fridge was - 19º and the temperature in the room is 21º. What is the
101. How many lines of symmetry has a circle? (one attempt)
102. The lengths of a right- angled triangle are 5cm, 12cm and b. If b is the longest side, find b.
103. Round off 98345 correct to 2 significant figures.
104. Given that set P = { a, b, c }.Calculate the number of subsets that set P has.
105. what is the number of significant figures in the number 0.0720?

# MATHEMATICS JUNIOR QUIZ ANSWERS(2012)

1. $2^{18} ÷ 2^{14}$
2. 0.1
3. 18$π cm$
4. An empty set
5. -178
6. 4xyz
7. K 75, 000=00
8. 64%
9. M
10. 320
11. 6 sides
12. $90^{0}$
13. $13$
14. Ratio
15. (x + y) (a + b)
16. 100
17. 2
18. 19
19. Duodecagon
20. $48cm^{2}$
21. $50\%$
22. $102^{0}$
23. 60 m/h
24. $\frac{3}{2} or 1\frac{1}{2}$
25. 4
26. 3
27. 5.40
28. X = 3
29. 20 min
30. 30 min
31. X = $\frac{-5}{1-b} or \frac{5}{b-1}$
32. X = -3
33. 14 cm
34. 6
35. $\frac{23}{7} or 3\frac{2}{7}$
36. O.4
37. 48 pupils
38. X $\leq -5$
39. 1 (one attempt)
40. X = $35^{0}$
41. -6 and +6
42. $70^{0}$
43. 60
44. $540^{0}$
45. $96$
46. 64
47. 49
48. 604800
49. Trapezium
50. Saturday
51. K5,000=00
52. 5
53. $\frac{4}{9}$
54. -27
55. 6
56. 0.09
57. 27
58. K40,000=00
59. 10,000$cm^{2}$
60. 254
61. 14
62. 5 elements
63. 24 girls
64. K184,000=00
65. $\frac{11}{30}$
66. 15 : 10 : 12
67. 2
68. 2
69. -2
70. 50 marbles
71. 28 $℃$
72. Mary 23 and Ann 28 years
73. 0.0016
74. -25
75. $\frac{1}{8}$
76. $145^{0}$
77. $3$
78. 7
79. $x^{3}cm^{3}$
80. $1000kilogrammes$
81. $70^{0}$
82. 120
83. $\frac{-7}{x^{3}y^{2}}$
84. $2214$
85. $720^{0}$
86. K30,000=00
87. $144^{0}$
88. (4,3)
89. 7
90. 4 hours 35 minutes
91. 63
92. 41
93. 2 X 2 X 2 X 3
94. 4
95. 6264
96. -4, -1.5, -0.3– 0.29, and 0
97. 1
98. -1
99. 17xy(3x-y)
100. $ $ $40^{0}$
101. Infinite or uncountable
102. $13cm$
103. 98000
104. 8
105. 3