**OPENER MATHS FORM 4 YEAR 2015**

**GATITU MIXED SEC SCHOOL**

1. The length of two similar iron bars were given as 12.5 m and 9.23 m. calculate the maximum possible difference in length between the two bars. 3mks
2. Use the prime factors of 1764 and 2744 to evaluate; 3mks

√1764

3√2744

1. The mass of a solid cone of radius 14 cm and height 18 cm is 4.62kg. find its density in g/cm3.3mks
2. Simplify 3mks

243 -2/5 × 125 2/3

9-3/2

1. Solve the equation, 4mks

2 log 15 – log x = log 5 +log (x -4)

1. Expand and simplify 2mks

(x + 2y)2 – (2y – 3) 2

1. The sum of interior angles of a regular polygon is 1800. Find the size of each exterior angle. 3mks
2. Solve 4≤ 3x -2 < 9 + x and hence list the integral values that satisfy the inequality. 3mks
3. A mirror arc of a circlesubtends an angle of 105 at the centre of the circle radius of the circle is 8.4 cm, find the length of the major arc.(take II -22/7 ) 3mks
4. Vectors r and s are such that r= 7i +2j – k and s= -I +j –k find /r+s/ 3mks
5. Solve the simultaneous equation below , 4mks

3x –y = 9

X2 – xy = 4

1. Muga bought a plot of land for ksh. 280,000. After 4 years , the value of the plot was ksh, 495,000. Determine the rate of appreciation, per annum, correct to one decimal place. 3mks
2. Points A( -2,2) and B (-3,7) are mapped onto A1(4,-10) and B1(0,10) by an enlargement. Find the scale factor of enlargement. 3mks
3. A businessman makes a profit of 20% when he sells a carpet for ksh, 36000. In a trade fair he sold one such carpet for ksh. 33600. Calculate the percentage profit made on the sale of the carpet during the trade fair. 3mks
4. The table below shows the frequency distribution of marks cored by students in a test.

|  |  |
| --- | --- |
| marks | Frequency |
| 1-10 | 2 |
| 11-20 | 4 |
| 21-30 | 11 |
| 31-40 | 5 |
| 41-50 | 3 |

Determine the median mark correct to 4 s.f. 4mks

1. A cow is 4 yrs 8months older than a heifer. The product of their ages is 8 years. Determine the age of the cow and that of the heifer. 3mks