**GATITU MIXED SECONDARY SCHOOL**

**MATHEMATICS FORM 4**

**TUNE UP TERM 2 2013 EXAM**

1. Use logarithms, correct to 4 decimal place, to evaluate. (4mks)

1.562

1. Without using a calculator, evaluate (2mks)

-8 + ( -5) × ( - 8) – ( -6 )

-3 + (- 8) ÷ 2 × 4

1. Use any method to solve the following simulations equations. (4mks)

4x = y + 7

6x + 5y =17

1. Without using tables or calculator, solve the equation. (3mks)

Log 10 (10x + 5 ) - log 10 (x -4) =2

1. Make k the subject of the formula. (4mks)

Y =

k - n

1. Expand (1 + 2x)7, hence use the expansion to estimate the value of (1.02)7 correct to five decimal places. (4mks)
2. Simplify 50 - 32 + **8 (2mks)**
3. Akinyi,Bundi,Alice and Dida invested some money in a business in the ratio of 7: 9:10: 14 respectively. The business realized a profit of sh 46,800. They shared 12% of the profit equally and the remainder in the ratio of their contributions. Calculate the total amount of money received by Dida. (3mks)
4. A Kenyan company receives US Dollars 100,000. The money was converted into Kenya shillings in a bank which buys and sells foreign currencies as follows:

Buying (in Kshs) Selling (in Kshs)

1US Dollar 77.24 77.44

1 Sterling pound 121.93 122.27

a. Calculate the amount of money, in Ksh, the company received. (2mks)

b. The company exchanged the kshs calculate in (a) above, into sterling pounds to buy a car from Britain. Calculate the cost of the car to the nearest sterling pound. (2mks)

1. A straight line passes through points A (- 3, 8) and (3, -4). Find the equations of the straight line through (3, 4) and parallel to AB .(give your answer in the form y = mx +c where M and C are constants) (3mks)
2. Given that sin (90 –x) =0.8, where X is an acute angle, find without using mathematical tables or a calculator, the value of tan xo. (2mks)
3. Simplify the expression. (3mks)

3a2 + 4ab +b2

4a2 +3ab –b2

1. A train moving at an average speed of 72 km/h takes 15 seconds to completely cross a bridge that is 80 metres long.

a.Express 72km/h in metres per second. (1mk)