**GATITU MIXED SECONDARY SCHOOL**

**MATHEMATICS FORM 3 END OF TERM 2 2015**

1. make c the subject of the formula in; 4mks

2w = 2

5 3c + t

13 c

1. use binomial expansion to evaluate;

6 6

2+ 5 - 2+ 5

1. P and Q are matrices. If p= , 3 4 find Q given that p2 = p+Q. 4mks 2 1
2. A quantity a, varies directly as another quantity b and a =10 when b=15. Find a when b=45. 2mks
3. Find the 6th term in the expansion of (2x+3y)10 3mks
4. Solve for X and Yin: 3mks

3

5y 15 + y 2 =32 47

10 5 2x 4 40 19

1. Two quantities P and Q are such that P varies partly as Q and partly as the square root of Q. when Q =4, P =22 and when Q =9, P=42. Find P when Q = 36. 3mks
2. The seventh term of an arithmetic sequence is 14 and its fifteenth term is 30. Find the 19th and 50th terms. 3mks
3. Expand (1+ 2x)8 up to the term in X4 2mks
4. Use the expansion above to evaluate the value of (0.98)8 2mks
5. The average of the first and the fourth terms of a geometric sequence is 140. If the first term is 64,find the common ratio and hence calculate the sum of the first 7 terms. 3mks
6. Lagat bought 40 cows and 56 goats at sh 176,000. If he boght 24 similar cows and 32 similar goats, he would have spent sh.72,000 less. USING MATRIX METHOD, find the cost of each cow and goat. 3mks
7. Y varies as X and inversely as the square root of n. given that y=20 when x=8 and n=25, find :
8. Y when n=36 and x =16 2mks
9. The percentage change in y when x is doubled and n is halved. 3mks