**GATITU MIXED SECONDARY SCHOOL**

**MATHEMATICS FORM 3 opener exam TERM 1 2015**

**ANSWER ALL THE QUESTIONS**

1. Use mathematical tables to evaluate. Give your answer to 3 sign figures. 3mks

 2.935 × 0.0765)

 32.74

1. Solve for x in the equation 3mks

812X × 27X = 729

 9X

1. A straight line passes through points A (-3, 8) and B (3,-4) and parallel to AB. Give the answer in the form y = mx + c where m and c are constants. 3mks
2. In the triangle ABC shown below DE is parallel to BC. If AE =3 cm and EC =2cm, determine the ratio of the area of the triangle ADE to that of triangle ABC. 2mks



1. Solve the simultaneous equations. 3mks

3X -2Y =7

5X + Y =3

1. In the fig. ABCD is a rhombus whose diagonals AC and BD meet X. Given that AC = 27.6 cm and BD = 16.2cm. Calculate the area of the rhombus. 2mks



1. A farmer has twice as many goats as cows and two thirds as many pigs as goats.
2. If he has x cows, write down a simplified expression in x for the total number of animals .1mk
3. Find the total number of animals given that the farmer has 20 pigs. 3mks
4. Calculate the area of the trapezium. 3mks



1. Simplify the following expression by reducing it to a single fraction 2mks

2x -3 - x -2 - 1 –x

3 2 4

1. It would take 15 men 8 days to dig a trench 240m long find how many days it would take 18 men to dig a trench 360 m long working at the same rate. 3mks
2. A trader sold an article at 15% discount to a customer who paid sh. 510 for it. What was the marked price of the article? 2mks
3. Solve for x in the equation 3mks

2(3x -2) × 8x = 4 (x +1)

1. Without using mathematical tables evaluate 4mks

Sin 60 tan 30 tan 45 – cos 45 sin 45 cos 60

Cos 30 tan 60 sin 30 – cos 60 sin 60 cos 30

1. Syengo spends 1/3 of his salary on food, ¼ on rent , 3/5 of the remainder on transport and saves the rest. If he spends sh. 1800 on transport, find how much money he saves. 3mks
2. The fig shows 2 circles centre A and B and radii 6 cm respectively. The circles intersect at P and Q. angle PAB = 420 and angle ABQ = 300.



1. Find the size of angle PAQ and PBQ 2mks
2. Calculate to one decimal place the area of
3. Sector APQ and PBQ 2mks
4. Triangle APQ and PBQ 2mks
5. The shaded area (take II =22/7) 4mks