**NAME ………………………………………… ADM NO ……………..**

**GATITU MIXED SECONDARY SCHOOL**

**MATHEMATICS FORM 2 TERM 3 2014 MID –TERM EXAM**

Answer all the questions.

1. Use logarithms to evaluate. 4mks

(0.07284)2

3√0.06195

1. Without using a calculator evaluate 3mks

14 ÷ 1/3 of 5 ¼ -3 ¾ × 1 1/3

3/5 × 6 ¼ +1 ½

1. The ratio of the lengths of the corresponding sides of two similar rectangular water tank is 3:5 .the volume of the smaller tank is 84m3. Calculate the volume of the larger tank. 3mks
2. Find the value of x in the following equation. 3mks

49(x+1) + 72x = 350

1. Four farmers took their goats to the market. Mohammed had two more goats than Ali. Koech 3 times as many goats as Mohammed , whereas Oduboy had 10 goats less than both Mohammed and koech.
2. Write a simplified algebraic expression with one variable, representing the total number of goats. 1mk
3. Three hutches bought all the goats and shared them equally. If each butcher got 17 goats. How many did Oduboy sell to the butchers. 3mks
4. Express 0.7373…….. as a fraction. 2mks
5. The ages of Sarah and Rose are in the ratio of 4:5 . the ages of Rose and Anne are in the ratio of 3:2 if Anne is 20 years old,how old is Sarah. 3mks
6. A motorist took 2 ¾ hrs to travel from town A to B . if he started the journey at 10.30a.m, determine the time the journey ended in:
7. 24 hour system 3mks
8. 12 hour clock system 2mks
9. A perpendicular in the line x/4 + y/3 =1 passes through the point ( 4,-5) determine its equation. 3mks
10. When the angle of elevation of the sun is 58 a vertical pole casts a shadow of length 5 m on a horizontal ground. Find the height of the pole. 3mks
11. Solve the following inequalities and represent the solution on a number line. 3mks

2x -5 < x -3 < 3x -6

1. show the region satisfied by the inequalities. 4mks

y <x , x ≤ 4 and x+ y <6

1. A motorist covers a distance of 120 km at a speed of 80km/hr and a further 150km at a speed of 90km/hr. find his average speed for the whole journey. 3mks
2. Solve the simultaneous equations. 3mks

3X – 2Y =7

5X +Y =3

1. Solve the equation 2mks

X -2 - 3 - X = X - 2

 3 4 2

1. Factorise 3x2 – 11x + 6 2mks
2. The fig shows a circle centre O and a cyclic quadrilateral ABCD. Angle ACB =400 angle DAC =20 and AOC is a straight line.



find the size of

1. Angle ADB 2mks
2. Angle BAC 2mks
3. Angle ACD 2mks
4. Angle CBD 2mks
5. Reflex angle AOB 2mks
6. The fig shows two circles centre A and B and radii 6 cm and 8 cm respectively. The circles intersect at P and Q angle PAB =420 and 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
6. The internal measurements of a lampshade below are 30 cm in diameter at the bottom and 20 cm at the top. Find the volume of the lampshade. 10mks



 ALL THE BEST