GATITU DAY MIXED SECONDARY SCHOOL

MATHEMATICS FORM 2 TERM 3 2012 C.A.T 1

1. Without using mathematical tables evaluate (3mks)

27.72 × 0.3876

2.09 × 0.4284

1. Given that a =2 b =-1 and c =3 find the value of : (3mks)

3a2 - 2b2 c + 4b

2ac + 2b3 -3c

1. Solve the simultaneous equations equations. (3mks)

3x -2y =7

5x +y =3

1. Find the range of values of x which satisfies the following inequalities simultaneously. (3mks)

4x -6 > x -12

8 – 3x > 2x -7

b.Represent this range of values of x on a number line. (1mk)

1. Find the gradient of the straight line joining the points P (2, 3) and Q (8, -6). (1mk)

b. Hence find the equation of the line through P perpendicular to line PQ (3mks)

1. A motorist travelled for 2 hrs at a speed of 80km/hr before his vehicle broke down. It took him half an hr to repair the vehicle .He then continued with his journey for 1 ½ hrs at a speed of 60 km/h.What was his average speed? (2mks)
2. The vertices of the unshaded triangular region at O (0,0) A(8,0) and B(8,8). Write down the inequalities which are satisfied by the region. (3mks)
3. The points A(2,6) B(1,1) C(2,3) and D(4,0) are the vertices of quadrilateral ABCD.

a. on the graph paper, plot the points A,B,C,D and join them to form quadrilateral ABCD . (2mks)

b. the points A1 B1 C1 D1 are the images of ABCD respectively under an enlargement centre the origin and scale factor -2. On the same grid draw the image quadrilateral A1 B1 C1 D1. (3mks)

c. the points A11 B11 C11 and D11 are the images of ABCD respectively under a reflection in the X axis. On the same grid, locate the points A11 B11 C11 D11 and draw the second image quadrilateral A11B11 C11 D11. (3mks)