**NAME……………………………………………………ADM NO:…………………………**

**MATHS QUIZ FORM TWO**

1. Use logarithms to evaluate: 1.23x0.0089 (4mks)

76.54

1. Simplify, 4xy – 3x + 8y2 – 6y (3mks)

8y – 6

1. A liquid spray of mass 38g is packed in a cylindrical container of internal radius 3.2 cm. given that the density of the liquid is 0.6g/cm3. Calculate to 2 decimal places the height of the liquid in the container. (3mks)
2. Simplify the following without using tables or calculator.
3. Sin600cos300 + sin300cos600 (2mks)

b) given that: tan(90 – x) = 4/3, where x is an acute angle, calculate sin x0 (2mks)

1. The area of a rhombus is 442cm2. If one of its diagonals is 34cm long, what is:
2. The length of the other diagonal? (2mks)
3. The length of one side of the rhombus (2mks)
4. Use the reciprocal tables to evaluate: 8.1 – 20 (3mks)

0.375 37.5

1. 3 bells ring at intervals of 12 minutes, 18 minutes and 30 minutes respectively. If they rang together at 11.55am, when will they ring together again? (2mks)
2. A perpendicular line to the line y - 4x = -3 passes through a point (-8,5). Determine its equation. (2mks)
3. The ration of lengths of corresponding sides of two similar rectangular water tanks is 3:5. The volume of the smaller tank is 8.1m3. Calculate the volume of the larger tank. (3mks)
4. Solve for x: 8x+1 + 23x + 1 = 128 (3mks)
5. Determine the length of the side marked with x (3mks)
6. Find the area of a triangle with sides 6cm, 10cm and 12cm. State your answer correct to 4 significant figure (2mks)
7. Two girls, one east and the other west of a tower, measure the angle of elevation of the top of its spire as 300 and 350. If the top of the spire is 120m high, how far apart are the girls? (3mks)
8. Find the total surface area of a triangular prism shown below in the diagram. (3mks)
9. Find the length of the minute hand of a wall clock if the tip of the minute hand traces a length of 4cm between 10.15am and 10.35am (give your answer in terms of П) (3mks)

**SECTION II -50 MARKS (answer ONLY FIVE questions in this section)**

1. The figure below shows two intersecting circles radii 8cm and 6cm respectively. The common chord AB = 9cm where P and Q are the centres as shown.
2. Calculate the size of angles:
3. <APB (2mks)
4. <AQB (2mks)
5. Calculate the area of the shaded region (6mks)
6. a) Three business men A, B and C contributed money to buy a matatu. The ratio of their contribution was 2:3:5 respectively. Of the matatu costs Ksh 1,000,000, find the difference between C’s contribution and that of A’s (5mks)
7. They agreed that 1/3 of monthly profit would be saved, 1/5 of the remainder would be used for spares and repairs and the rest would be shared among the three in the ratio of their contribution, in the month of December A got Ksh.20,000.
8. How much was saved? (2mks)
9. How much was used for repairs and spares (3mks)
10. Measurements of a maize field using a base line XY were recorded as shown below. (measurements are in metres)

|  |  |  |
| --- | --- | --- |
| To R 60  To S 100  To T 30 | Y  240  190  180  150  120  100  50  20  X | 75 to Q  50 to P  100 to N  30 to M |

1. Use a suitable scale to draw the map of the maize field (4mks)
2. Find the area of the field in Hectares (6mks)
3. The Matatus M1, M2 and M3 are approaching a stage Q which is on a bearing of 3400 from an adjacent stage W. Matau M2 is East of stage Q and 6km from W on a bearing of 0400, while M1 is on a bearing of 0450 from . Matatus M3 and M1 are due North of W. if M3 is on a bearing of 2500 from M2, find by scale drawing: (6mks)
4. The bearing of M2 from M1
5. The bearing of M3 from Q
6. The distance between: (4mks)
7. M1 and M2
8. M1 and M3
9. a) The points A(3,4), B(1,1) and C(3,1) are vertices of triangle ABC. On the graph paper, plot the points A, B and C and hence draw ABC. (2mks)

b) Triangle A1B1C1 is the image of triangle ABC under enlargement centre, the origin and scale factor 2. On the same grid draw triangle A1B1C1 and state the coordinates of its vertices. (3mks)

c) Locate and write down the coordinates of points A11B11and C11 and hence draw triangle A11B11C11 (4mks)

d) The points A111(-8,-6), B111(-2,-2) and C111(-2,-6) are the images of A11B11C11 on the same grid and describe transformation T (2mks)