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GATITU SECONDARY SCHOOL P.O BOX 327-01030 GATUNDU

FORM 2 MID TERM MATHEMATICS EXAM 1ST TERM 2015.

TIME 2 HOURS;

NAME----------ADM----------

INSTRUCTIONS

1 Show all your workings on the spaces provided below each question

1 The cost of 5 skirts and 3 blouses is sh 1750. Mueni bought three of the skirts and one of the blouse for sh 850. Find the cost of;

(i) 1 skirt (2mk

(II) 1 blouse (2mks)

(b)Three years ago Juma was three times as old as Ali. In two years time the sum of their ages will be 62. Determine their present ages (3mks)

2 A Kenyan business man owes U S§100,000 to a company in the United States of America. The Kenyan can either pay through his account in kenya or through his account in the united states. Which method is cheaper and by how much? (4mks)

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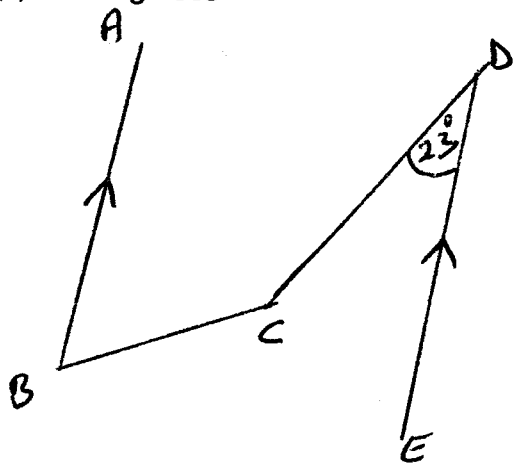
1 U S dollar =28.74 Kenyan shillings

1 sterling pound = 1.79 U S dollar

1 sterling pound =50.80 Kenyan shillings.

3 `In the figure below AB// DE, angle ABC =70^0 and angle CDE =23^0

(a) Find angle BCD (3mks)



(b)The size of an interior angle of a regular polygon is 3X^0, while its exterior angle is (X-20)^0.Find the number of sides of the polygon. (3mks)

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4 A town P is 200km west of Q .Town R is at a distance of 80 km on a bearing of 049^0 from P. Town S is due East of R and due North of Q. Using suitable scale and drawing to scale ;determine the bearing of S from P (4mks)

5Aport B is on a bearing of 080^0 from a port A and a distance of 95km . A submarine is stationed at a port D which is on a bearing of 200^0 from A and a distance of 124mk from B. A ship leaves B and moves directly south wards to an island P, which is on a bearing of 140^0 from A. The submarine at D on realizing that the ship was headed for the island P decides to head straight for the island to intercept the ship. Using a scale of 1 cm to represent 10 km,make a scale drawing to show the relative positions of A ,B ,D and P. (2mks)

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Hence find;

(i) The distance fromA to D (2mks)

(ii)

(iii) The bearing of the submarine from the ship when the ship was setting off from B.(2mks)

(iv) The bearing of the island P from D (2mks)

(v)

(vi) The distance the submarine had to cover to reach the island P. (2mks)

6 The following table gives the expectation of life at different ages e.g a person aged 10 years is expected to live 49 years more.

Age in years(x)	0	1	5	10	15	20	25	30	35	40	45	50	55	60
Expectation in years(e)	52	56	53	49	45	41	37	33	29	25	23	21	18	14

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Draw the graph of eagainst x . (3mks)

Use your graph to answer the following questions;

(a) What is the expectation of life at the age of;

(i) 7 years (1mk)

(ii)

(iii) 34years (1mk)

(iv) 58 years (1mk)

(b) At what age is the expectation;

(i) 20 years (1mk)

(ii)

(iii) 25years (1mk)

(iv)

(v) 26 years (1mks)

(c) At what age is the expectation highest (1mk)

7 Using a ruler and compasses only construct an acute angled triangle A B C such that angle ABC $=45^0$,BC =9 cm and AC =7cm (3mks)

(c) Construct perpendicular bisectors of this triangle. (3mks)

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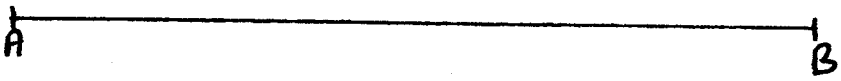
(c) Measure;

(i) AX (1mk)

(ii) AB (1mk)

(iii) Angle AXC (2mks)

8 Divide line AB into 7 equal parts. (2mks)



(b) Using a ruler and a pair of compasses only ;

(i) Construct a square W, X, Y, Z whose side is 5.6 cm. (3mks)

(II) Measure XZ (1mk)

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(III) Construct an octagon inside the above square. (2mks)

9 On a map 1 cm represent 4 km.

(a) Rewrite this scale as R .F. (2mks

(b) What distance on the ground is represented by 3.7 cm on the map. (2mks)

(c) Two towns A and B are 42.8 km apart on the ground. What is this distance on the map? (2mks)

10 A map is drawn to a scale of 1: 50,000.

(a) Write this scale as a statement connecting map distance to ground distance. (2mks)

(b)A railway line measures 8.3 km. What is its length on the map. (2mks)

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