**KAHUHO UHURU HIGH SCHOOL**

 **FORM 1 MATHEMATICS : TERM 3 YEAR 2013**

 **MID TERM EXAMINATION: TIME 1½ HOURS**

**ANSWER ALL THE QUESTIONS IN THE SPACES PROVIDED**

1. **Evaluate**

$\frac{-4 of \left(-4+ -5 ÷15\right)+ (3-2 ÷6)}{84 ÷\left(-7\right)÷3-(-5)}$ **(3 marks)**

1. **Work out the following leaving your answer as a fraction in its simplest form**

$\frac{2½ ÷3⅓ of \frac{21}{40}-1⅓}{\frac{1}{12}-2\frac{2}{3} ×1\frac{1}{4}}$ **(3marks)**

1. **Simplify**

 **10a -8b -4(4b+c) (2 marks)**

1. **The area of a square board is 104.3 cm2. Find its perimeter (3marks)**
2. **A carpenter had three pieces of timber of lengths 40 cm, 56cm and 64cm. He cut the timber into smaller pieces of equal length. Calculate:**
3. **The greatest p0ssible length of each piece that the carpenter cut. (2mks)**
4. **The total number of pieces of timber obtained. (2mks)**

 **6.Solve for x in the following equation**

$\frac{x-1}{3}$ **-** $\frac{x-2}{4} $ **= 0 (3mks)**

**7. A solid whose volume is 64 cm3 has a mass of 80g. Calculate its density in kg/m3.**

**8 (a) Calculate the height of the triangle ABC in the figure below**

 **(2mks)**

**.**

**(b) Hence find the volume of the prism. (2mks).**

**9 Solve the following simultaneous equations using the substitution method. (3mks)**

 **5x –y = 7**

 **3x + y = 9**

**10. It would take 15 men 8 days to dig a trench 240 metres long. Find how many days it would take 18 men to dig a trench 360 metres long working at the same rate. (2mks)**

**11. Given that**

 **X = a3 –b2 + c2**

 **ab**

 **and that a =-1, b = 2 and c=3 ; find x (3mks)**

**12. A tourist arrived in the country with US$ 2000 which he changed into Kenya shillings. He spent**

 **Kshs 60000 on hotel accommodation and Kshs 45020 on travelling. 1US$= Kshs86.85 buying rate of the bank.**

1. **How much did he spend in US$ (2mks)**

1. **He changed the remaining money into sterling pounds at the rate of £1= Kshs 139.95. How much money in sterling pound did he get. (2mks)**

**13. Express 0.1333…. as a fraction in its simplest form. (3mks)**

**14. Three partners Auma, Barua and Chiku contributed Kshs 200 000, Kshs 300 000 and Kshs 500 000 respectively for a business enterprise. They realized a profit which they shared in the ratio of their contributions. If Auma and Chiku together Kshs 105000, calculate the total profit realized from the business. (3mks)**

**15. Kamau bought 2 pairs of trousers and 3 shirts and paid a total of shs 3100. Had he bought 4 such pairs of trousers and 3 such shirts, he could have paid shs 4700. Find the price of a pair of trousers and a shirt. (4 mks)**

**16. A blouse has a marked price of shs 500. The shopkeeper can allow a discount of 10% on the marked price and still make a profit of 20% on the cost price. Find the cost price of the blouse (3mks)**