NAME.....**ADM. No**.....**CLASS**.....

TIME: $2\frac{1}{2}$ *HOURS*

SECTION 1: Attempt all the questions in this section(50 Marks)

1. Use the number line to perform the following operations.

a) (-10)-(-3) [**2 Marks**]

b) (+1)-(-8) [**2 Marks**]

2. Evaluate $\left\{\left(1\frac{1}{4}-\frac{3}{8}\right)\div 2\frac{1}{2}+1\frac{3}{4}\div 1\frac{1}{4}\right\}$ [**3 Marks**]

3. Three boys shared some money. The youngest got $^1/_{12}$ of it, the next got $^1/_9$ and the eldest got the remainder. If the eldest boy got shs. 330, what was the original sum of money? Give your answer to the nearest shilling.

[**3 Marks**]

4. A matatu travelling at 56 Km/h takes $2\frac{1}{2}$ hours to move from town A to town B. Find the distance between towns A and B. [**3 Marks**]

5. Solve the following equation $\frac{x+1}{2}+\frac{2x+1}{3}=9$ [**3 Marks**]

6. A trader sold a wrist watch for sh. 3,150 after giving a 10% discount. Find the marked price of the watch. [**3 Marks**]

7. Divide the line AB below into six equal sections. [**3 Marks**]

8. (a) Convert $\frac{3}{4}$ into percentage: [**2 Marks**]

(b) Convert $2.\dot{3}\,0\dot{4}$ into a fraction. [**3 Marks**]

9. Write in figures five billion five million five thousand and five.[**3 Marks**]

10. What fraction does letter K represent in the diagram below? [**2 Marks**]

K	L	L	L	K
L	K	K	L	W
L	L	L	K	L
L	K	L	L	L

11. State the value of digit 7 after the operations below.
3.45 x 20.54 [**3 Marks**]

12. Round off the following numbers to the nearest values indicated in the brackets,

a) 370 (1000) [**1 Mark**]

b) 2499 (10) [**1 Mark**]

13. A number n is such that when its divided by 3,7,11 or 13, the remainder is always one .Find the least value of the number n. [**3 Marks**]

14. The size of each interior angle of a regular polygon is seven times the size of the exterior angle. Find the number of sides of the polygon. [**3 Marks**]

15. If **x=-2**, **y=-6** and **z=4**, find the values of ***2y-3x+z*** [**3 Marks**]

16. A Forex Bureau in Kenya buys and sells foreign currencies as shown below:

Currencies	**Buying** (Kshs)	**Selling** (Kshs)
Chinese Yuan	12.34	12.38
South African Rand	11.28	11.37

A business woman from china converted 195,250 Chinese Yuan into Kenya Shillings. While in Kenya, the businesswoman spent Kshs 1,258,000 and then converted the balance to South African Rand. Calculate the amount of money, to the nearest Rand, that she received. [**4 Marks**]

SECTION II: Attempt ALL the questions in this section (50 Marks)

17. A bird flies from tree **P** to another tree **Q** which is **50m** on a bearing of **030°** from **P.** From **Q** the bird flies **80m** due west to another tree **R** and finally flies due south to another tree **S** which is on a bearing of **120°** from **P.**

(**a**) Using the scale ***1cm to represent 10m***, construct an accurate scale drawing showing the positions of **P,Q,R,** and **S.** [**6 Marks**]

(**b**) By measurement from your scale drawing determine;

(**i**) The distance in metres and the bearing of **P** from **R.** [**2 Mark**]

(**ii**) The distance in metres and the bearing of **S** from **R.** [**2 Marks**]

18. The table below shows recordings in metres of a surveyors' field book.

	B	
	280	
TO E 25	200	
	160	80 TO F
TO C 70	120	
	100	50 TO D
	A	

(a) Using a scale of 1cm to represent 20m construct the diagram to represent the above data. [**5 Marks**]

(b) Calculate the area of the above land in:

(i) Square metres. [**3 Marks**]

(ii)Hectares. [**2 Marks**]

19. A saleswoman is paid a commission of 20% on goods sold worth over Ksh 100,000.She is also paid a monthly salary of Ksh 12,000.In a certain month, she sold 360 handbags at Ksh 500 each.

(a) Calculate the saleswoman's earnings that month.[**4 Marks**]

(b) The following month, the saleswoman's monthly salary was increased by 10%. Her total earnings that month were Ksh 17,600.Calculate:

(i) The total amount of money received from the sales of handbags that month. [**4 Marks**]

(i) The number of handbags sold that month. [**2 Marks**]

20. Use a ruler and a pair of compasses only in this question.

(a) Construct triangle **ABC** in which **AB** = 7 cm, **BC** = 8 cm and ∠**ABC** = 60^0.
[**5 Marks**]

(b) Measure:

(i) side **AC**. (1mk)

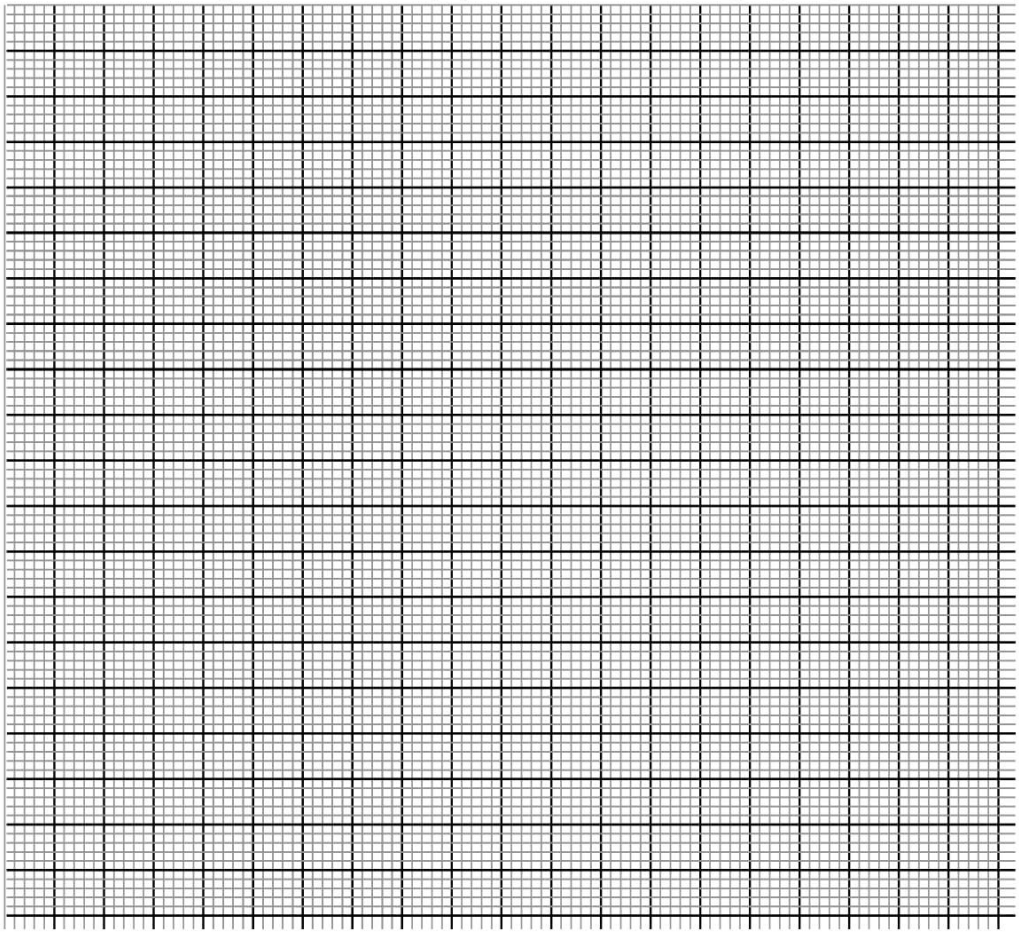
(ii) ∠ **ACB**. (1mk)

(c) On the same diagram, bisect angle **BAC** to meet line **BC** at **P**. Measure the length of line **AP** [**3 Marks**]

22. The total weekly wages for 12 artisans and 4 apprentices are sh.5600. If the number of artisans is increased to 15 and that of the apprentices to 9, the weekly wages are sh.7800.

(a) Write two simultaneous equations to represent the above information. [**2 Marks**]

(b) Represent the equations in (a) above on the graph provided. [**6 Marks**]



(c) From the graph, determine the amount paid to

(i) One artisan. [**1 Mark**]

(ii) One apprentice [**1 Mark**]