Tekart

Mathematics

Revision Practice Booklet

Vol 1

Index No:

Name:

School:

Year:

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SECTION A: 40 MARKS

Answer **all** *questions in this section*
Question **1** *to* **20** *carry two marks each*

1. Work out: 375 plus 428

2. Express CXCVI as Hind Arabic numerals.

3. Subtract 124_{five} from 413_{five}

4. Find the next two numbers in the sequence below;
   1, 3, 6, 11, 18,___,___

5. Annet ate $\frac{3}{4}$ of the sugarcane and Mary ate $\frac{1}{3}$ of the remainder .

   What fraction did they eat altogether?

6. Without dividing, show that 375 is divisible by 3.

7. Without using a pair of compasses, draw an angle of 120° in the space provided below.

8. Prime factorise 18 and write your answer in superscript form.

9. Given that Q has 15 proper subsets, find n(Q).

10. Add :

	weeks	Days
	5	4
+	2	6

11. Given that  represents 9 carrots.
How many pictures can represent 63 carrots?

12. A parent had a certain number of apples. He shared them among 6 boys but 1 apple remained. When he shared the same number of apples among 4 girls, still 1 apple remained.
Find the least number of apples the parent shared.

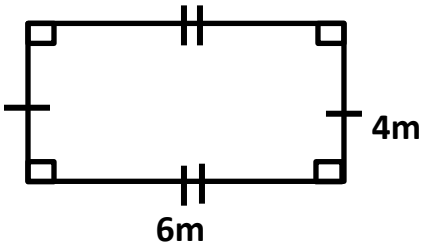
13. A forty minute lesson started at 9:30am.
At what time did the lesson end?

14. By selling a goat at sh.450,000 a trader made a profit of sh.70,000.
At what price did the trader buy the goat?

15. The age of Ben is thrice that of Ali. If Ali is 12 years old. How old is Ben?

16. In the diagram below , un shade $\frac{3}{4}$

17. Kipromo ran round the figure below thrice. Find the total distance he covered



18. Given that a = $^{-}3$ and b= 4.Find the value of 2b – 2a

19. A driver moved a distance of 180km in $1\frac{1}{2}$ hours.
    At what speed was he moving?

20. Florence bought 12 bars of white star soap.She cut them into quarter small pieces. How many small pieces of soap did she cut from the 12 bars of soap?

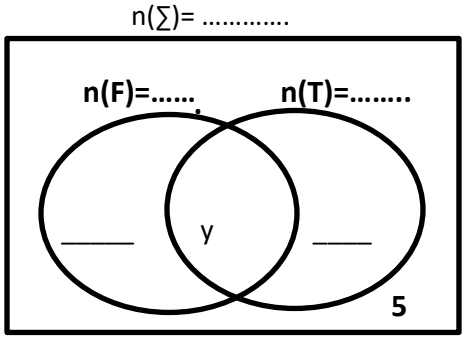
SECTION B: 60 MARKS

Answer **all** *the questions in this section*

Marks for each question are indicated in bracket

21. In a group of players, 32 players like playing Tennis(T), 7 like playing football only, y like playing both games and 5 do not play any of the two games.

a) Complete the venn diagram below. ***(2marks)***



b) If 27 players like playing football, how many players are in the group? ***(3marks)***

c) Find the probability of selecting a player who likes playing netball. ***(1mark)***

22. a) Work out : $42_{\text{five}} \times 3$ ***(2marks)***

b) Round off 47 to the nearest tens using a number line. ***(2marks)***

c) Express 43_{five} as a binary base. ***(2marks)***

23. The sum of 3 consecutive even numbers is 24. If the largest number is k. Find the numbers. ***(4marks)***

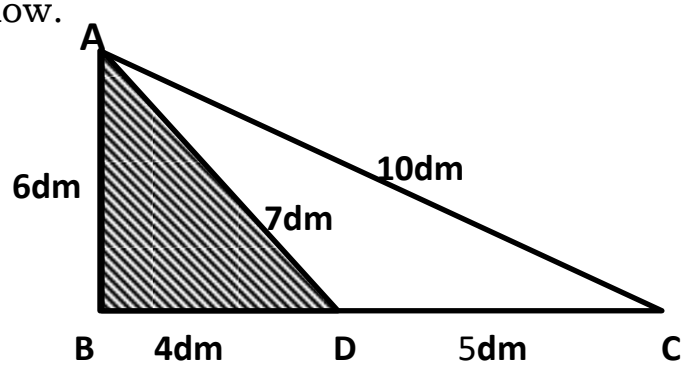
24. In a mathematics test, pupils obtained marks as shown below:

Pupils	Joshua	Joan	Jane	Joseph
Marks	70	30	40	50

a) Work out the median mark. ***(2marks)***

b) Calculate for the mean mark. ***(2marks)***

25. Study the figure below carefully and use it to answer the questions that follow.

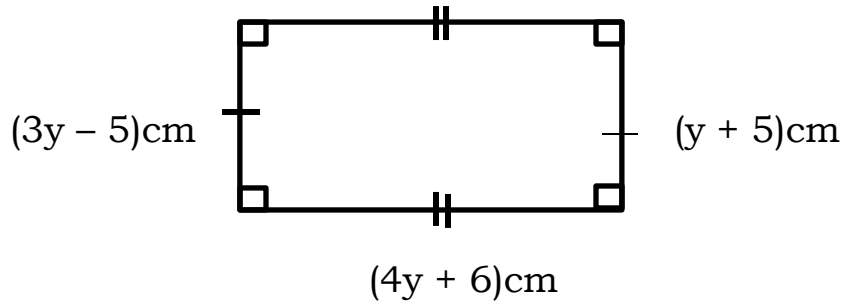


a) Find the area of the un shaded figure. ***(2marks)***

b) Calculate the area of the figure ABC. ***(2marks)***

c) Calculate the total distance of the figure ADC. ***(2marks)***

26. Study the figure below carefully and use it to answer the questions that follow:



Find the area of the above figure. ***(4marks)***

27. In a class, $\frac{3}{4}$ of the pupils are boys and the rest are girls.

a) What fraction is for girls? ***(1mark)***

b) If there are18 girls in the class, how many boys are in the same class?

(3marks)

c) Find the total number of pupils in the whole class. ***(2marks)***

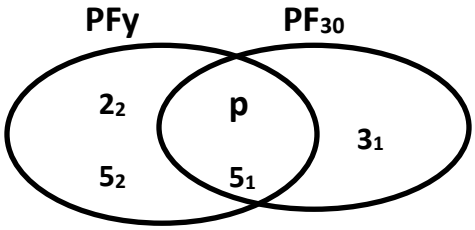
28. Haruna went to the supermarket and bought the following items:

Items	**Quantity**	**Unit cost**	**Total cost**
Rice	2kg	Sh…….	Sh.8,800
Meat	……kg	Sh. 10,000	Sh.5,000
Soap	3 bars of soap	Sh. 7,000	Sh…….
Total expenditure			Sh. ……

a) Complete the above table. (please show your working). ***(4marks)***

b) If Haruna remained with sh.50,000 as his balance. How much money did he have at first? ***(2marks)***

29. Use the diagram below to answer the questions that follow.



a) Find the value of ; ***(1mark each)***

i) p ii) y

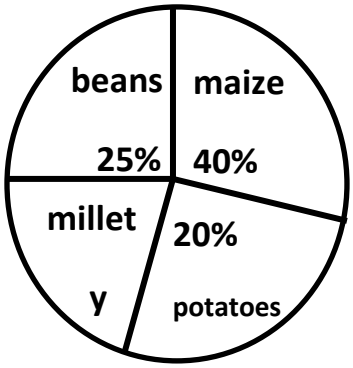
b) Find the LCM of the PF_y and the PF_{30} ***(2marks)***

30. a) Work out; $\frac{3.9 + 3.6}{0.06 \times 0.5}$ ***(3marks)***

b) Reduce $\frac{12}{13}$ to the lowest term. ***(1mark)***

31. The pie chart below shows how Atukunda makes use of his land .
He uses 1200 sq.m for growing potatoes.

a) Find the value of y in percentage



(2marks)

b) Calculate the area of the land. ***(2marks)***

c) Express the land used for growing potatoes as degrees. ***(1mark)***

32. Using a pair of compasses, ruler and a very sharp pencil only,

a) Construct a rectangle ABCD where line AB is 7.4cm and line BC is 4cm. ***(4marks)***

b) Measure diagonal line BD = ... cm ***(1mark)***

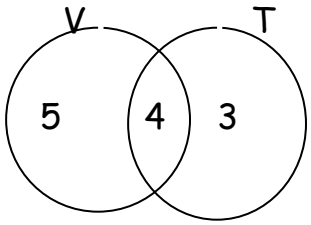
END

SECTION A: (40 MARKS)

1. Work out: 80 ÷ 4

2. Write 70,603 in words.

3. The Venn diagram shows the number of boys who play Volley ball (V) and tennis (T). Find the number of boys who play one game only.



4. Simplify: 9k – 4y – 3k + 5y.

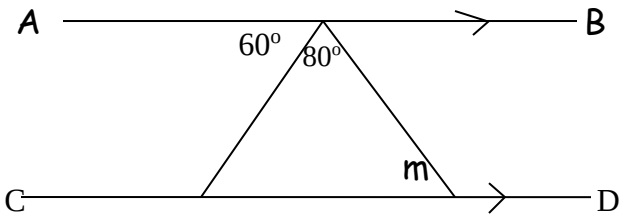
5. Work out: $\frac{3}{4} - \frac{2}{5}$

6. Damalie picks 28 mangoes every day. How many mangoes will she have picked in nine days?

7. Using a pair of compasses, pencil and a ruler only, construct an angle of 22 $\frac{1}{2}^{o}$ in the space provided below.

8. Write the number whose scientific notation is 8.61×10^{-2}.

9. In the diagram below, find the value of m.

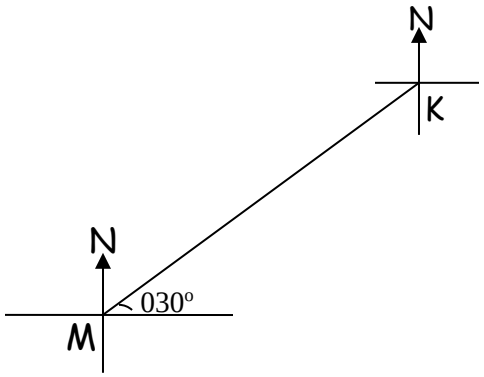


10. A meeting which lasted $1\frac{1}{3}$ hrs, ended at 5:10 p.m. What time did it start?

11. Express 0.16 as a fraction to its lowest term.

12. The base area of a cube is $49cm^2$. Calculate the volume of the cube.

13. Find the bearing of town m from town K in the diagram below.

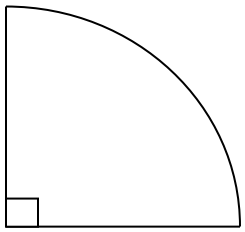


14. A woman deposited sh. 360000 on her savings account in a bank which offers an interest rate of 5% per annum. After how long will she get an interest of sh. 10500?

15. Work out: $3\ 0\ 3_{five}$
$-\quad 2\ 2_{five}$

16. A boy had 20km still to cover after travelling $\frac{3}{4}$ of the journey. How long was the journey?

17. Find the perimeter of the figure.



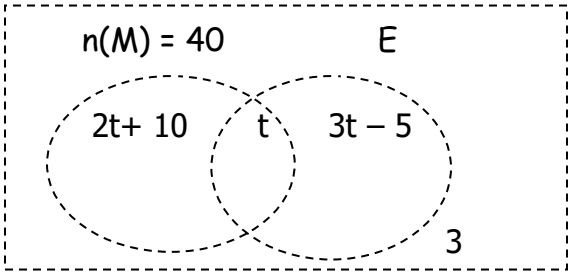
18. Mr. Mawanda walked 1800 metres in 18 minutes. Find his average speed in km/hr.

19. Given that p = 4 and r = -3, Find the value of $\frac{3p + r}{r}$

20. Solve for y: 2y – 3 = 4 (finite 5)

SECTION B: (60 MARKS)

21. In the Venn diagram below, 40 pupils like Mathematics (M) and some like English (E) while t like both subjects.



(i) Find the value of t. (*2 marks*)

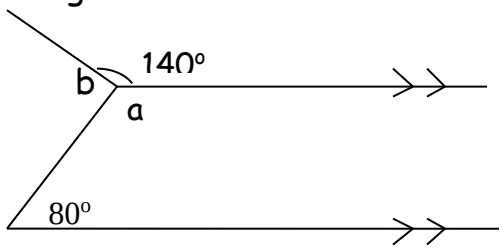
(ii) How many pupils like English? (2 marks)

(iii) How many pupils are there altogether? (2marks)

22. Mrs. Mukasa spends $\frac{1}{4}$ of her salary on food, $\frac{2}{5}$ of the remainder on rent and saves sh. 54000. How much is her salary? (5 marks)

23. Find the area of a circle whose circumference is 132cm. (*4marks*)

24. Study the figure below and answer the questions that follow:



(a) Find the value of a. (2 marks)

(b) Find the value of b. (3 marks)

25. A motorist covered a distance of 360km in 3 hrs from home to town A. He then continued to town B at a speed of 90 kph for 2 hours.

(a) How far is town B from town A? (*2marks*)

(b) Work out the average speed for the whole journey? (3marks)

26. Study the table below and answer the questions that follow.

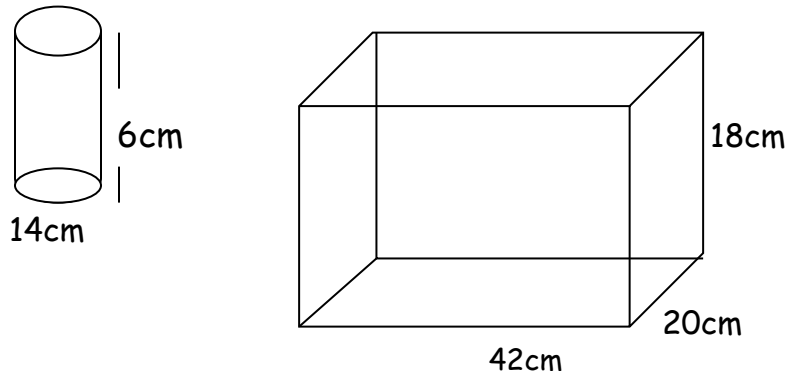
Currency	**Buying price**	**Selling price**
1 US dollar	Ug. Sh. 2500	Ug. Sh. 3000
1 K. sh.	Ug. Sh. 18	Ug sh. 25

(a) If a tourist has 600 dollars and 400 Kenya shillings, how much money in Ug. Sh. Can he get? (*3 marks*)

(b) Sarah has sh. 900000. How many US dollars can she get?(*2 marks*)

27 Using a pair of compasses, a ruler and a pencil only, construct rhombus ABCD of sides 5 cm with diagonals AC = 8 cm and BD = 6cm. (4 marks)

28a) The cylindrical tins (A) are to be packed into the box (B) as shown below.



a) How many tins can be packed in the 1st layer? (*1mark*)

(b) How many layers can be packed in the tin? (*1mark*)

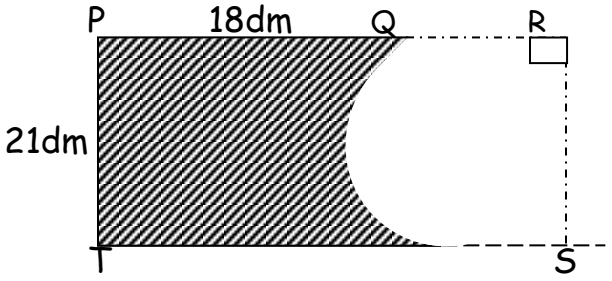
(c) Find the volume of the space not provided after packing the tins into the box. (4 marks)

29. (a) Solve for p: $4(4p - 2) - 4(2p + 6) = 16$ (3 marks)

(b) Find the value of n in the expression below.

$32_n = 26_{ten}$ (2 marks)

30. (a) Find the area of the shaded region. *(3marks)*



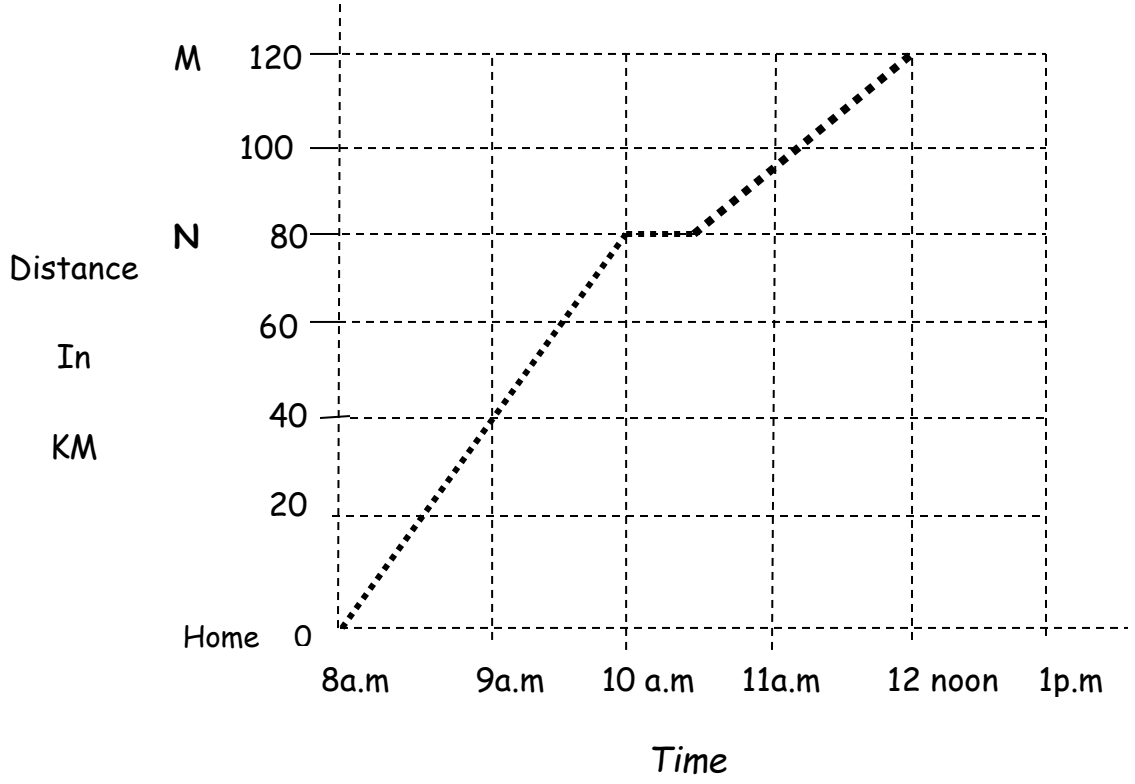
(b) What is the perimeter of figure PQST? (2 marks)

31 Timothy bought a radio at sh. 280000. He later sold it to Willy at a profit of 20%. Willy sold it to Moses at a loss of 5 %.

(a) Find the profit Timothy made. (2 marks)

(b) How much did Moses buy the radio? (3marks)

32. The graph below shows a motorist moved from home to town m via town N. Study it carefully and answer the questions that follow.



(a) Find the motorists speed from home to town N. (2 marks)

(b) At what time did the motorist leave town N? (2 marks)

(c) Calculate the average speed for the whole journey. *(2 marks)* ***END***

SECTION A (40 Marks)

1. Work out: 48 ÷ 4

2. Express XLIV in Hindu – Arabic numerals.

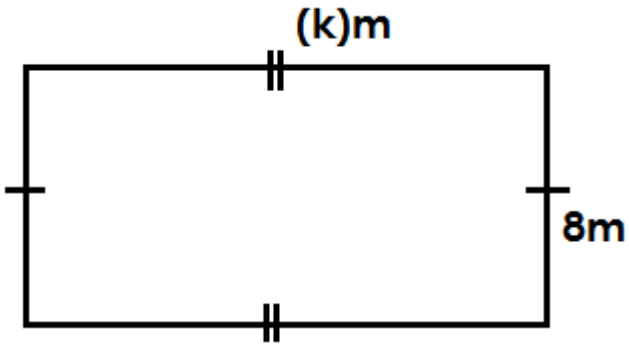
3. Simplify: 5p – (-3 + p)

4. Work out: $2\frac{1}{4} - \frac{2}{3}$.

5. Given that set R = { b, c, d, e, f }, find the number of subsets in set R.

6. A trader withdrew a bundle of 5,000 shilling notes from a bank numbered consecutively from BT 8182010 to BT 8182199. How much money did the trader withdraw?

7. The figure below has a perimeter of 42m. Work out the value of k.



8. Find the next number in the sequence: 36, 34, 31, 26, 19, _____

9. Using a pair of compasses, a ruler and a pencil only, construct an angle of 30^0 in the space below.

10. Simplify: $\bar{3} - \bar{8}$.

11. A student left home in the morning to go to school at the time shown on the clock face below. If she took 45 minutes to reach school. Find her arrival time to school.

12. Find the mean of n, 3n – 5 and 2n – 7.

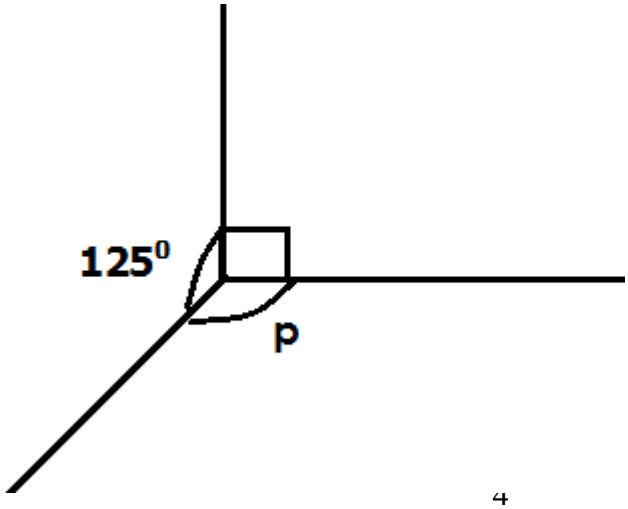
13. Work out: $\frac{3^2 \times 3^4}{3^3.}$

14. Write $8\ ^1/_3\%$ as a fraction in its simplest form.

15. Tea is sold in ¾ kg packets. How many packets can be made from 24 kg of tea?

16. Simplify; $\frac{y+6}{2} + \frac{y-2}{5}$

17. Study the diagram below carefully and use it to find the value of P in degrees.



18. Find the smallest number of pencils that can be shared by 24 pupils or18 pupils leaving a remainder of 3 pencils in each case.

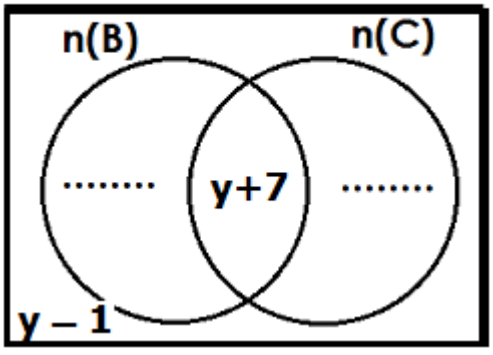
19. How long does a train moving at 48km/hr take to cover a distance of 36km?

20. If today is Monday, what day of the week will it be after 38 days?

Section B

21(a) At a birthday party, 2y guests ate Beef (B) only, 14 ate chicken (C) only, (y+7) guests ate both and (y – 1) ate none of the two.

(a) Complete the Venn diagram below.



(b) Work out the value of y if 29 guests did not eat chicken. **(2 marks)**

(c) Find the number of guests who attended the party. **(2 marks)**

22(a) Work out $1101_{two} + 110_{two}$. **(2 marks)**

(b) If $103_X = 28_{ten}$, find the value of x. **(3 marks)**

23. A man spends 75% of his monthly salary and saves the rest. If he saves 180,000/-, find his salary. **(4 marks)**

24. Namutebi went to the market and bought the following items.

3 bars of soap at sh. 3500 per bar.
2 ½ litres of milk at sh. 1500 per half litre.
250gms of sugar at sh. 4200 per kg.

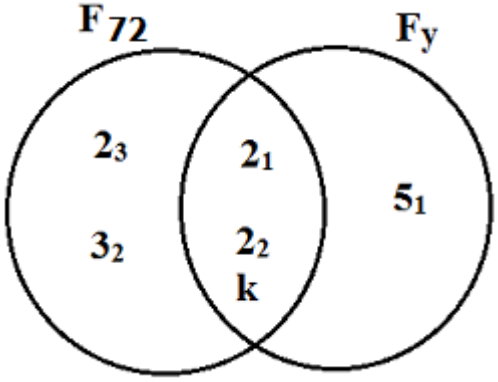
(a) How much money in total did she spend on the above items? **(4 marks)**

(b) If she went to the market with sh. 20,000, how much was her change? **(1 mark)**

25(a).Using a pair of compasses, a ruler, and pencil only, construct a triangle KLM where LM = 7cm, angle KLM = 60^0 and angle LMK = 45^0. Drop a perpendicular at K to meet LM at P.
(5 marks)

(b) Measure the length K P. **(1 mark)**

26. **Study the Venn diagram below and use it to answer the questions that follow.**

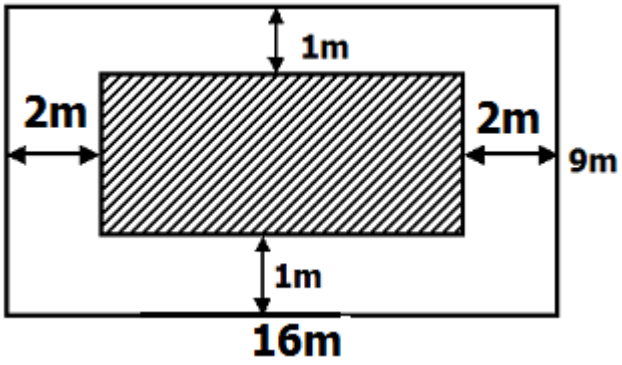


/

(a) Find the value of k. **(2 marks)**

(b) Calculate the LCM of 72 and y. **(2 marks)**

27. The diagram below shows a rectangular floor that is covered with a mat.
The area covered with the mat is shaded. Find the area of the floor that is not covered with a mat. **(5 marks)**



28(a) Solve the inequality: $\bar{6} \leq \bar{3}(k - 2)$ **(3 marks)**

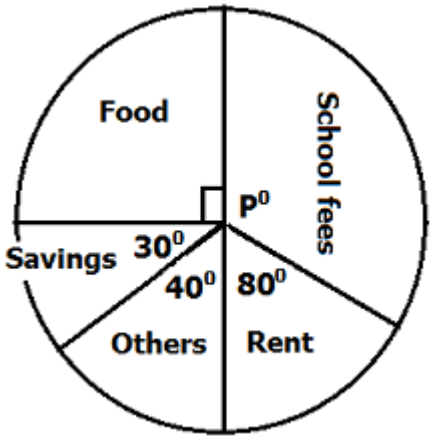
(b) Find the solution set for the above inequality. **(1 mark)**

29. In a basket, $^{5}/_{8}$ of the apples are red, $^{1}/_{6}$ are yellow and the rest are green.

(a) Find the fraction of the green apples in the basket. **(3 marks)**

(b) If they are 60 green apples in the basket, how many apples are in the basket altogather? **(2 marks)**

30. **The pie-chart below shows how Adong spends her salary. Use it to answer the questions that follow.**



(a) If she spends sh. 240,000 on school fees, what is her salary? **(4 marks)**

(b) What percentage of her salary does she save? **(2 marks)**

31. A motorist left town A at 9:15am driving at 80km/hr and reached town B at 11:45 am.
(a) Find the time taken from town A to town B. **(1 mark)**

(b) How far is town B from town A? **(2 marks)**

(c) If his car uses 3 litres of fuel for every 40km. find the number of litres of fuel needed for the whole journey**.** **(2 marks)**

32. The length of a road leading to Kololo Junior school is 1.8 km. Poles were fixed in straight lines on both sides of the road at intervals of 20 metres.

(a) How many poles were used altogether? **(3 marks)**

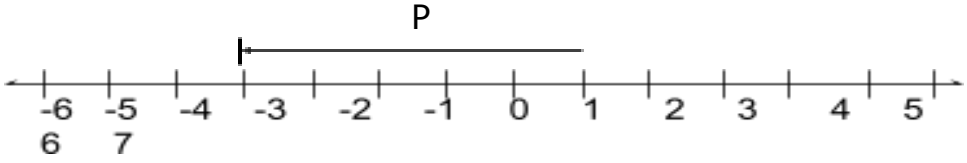
(b) If the cost of each pole was sh. 3,000, how much money did the school spend on the poles altogether? **(2 marks)**

END

SECTION A: (40 MARKS)

1. Subtract:
$$\begin{array}{r} 4\ 8 \\ -\ 2\ 3 \\ \hline \\ \hline \end{array}$$

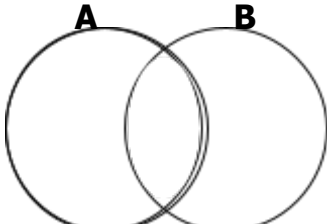
2. Write the integer shown on the number line below.



P = _____

3. Write in words; 22,202

4. Describe the un-shaded region in the diagram below.



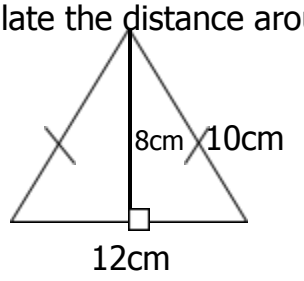
5. Work out: $\frac{1}{3} - \frac{1}{5}$

6. If  represents 15 pots and costs sh 6500@, how much does one get from  ?

7. Find the range of the next two numbers in the sequence.

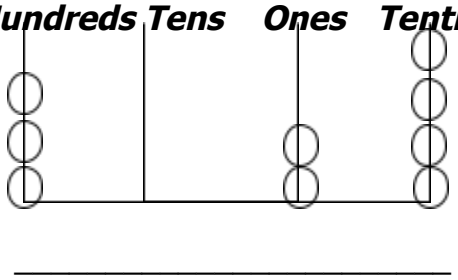
   2, 4, 7, 12, 19, _____, _____

8. Calculate the distance around the figure below.



9. Given that set R = {vowel letters}. Find the number of proper subsets.

10. Write the number shown on the abacus below in Roman numerals.



_____

11. An examination started at and took 2 hours 30 minutes. At what time did it end?

12. Work out using distributive property.
(10 x 3.5) + (6.5 x 10)

13. The cost of 1kg of rice is sh. 3600. Find the cost of 250 grams of rice.

14. Using a pair of compasses, a ruler and a pencil only, construct an angle 75^0.

15. Simplify: $5p - q - p - 2q$

16. Work out: $12 - 15 + 8 - (47 + 56)$

17. Find the supplement of $(40-y)^0$

18. A milkman sells milk in quarter litre cups. How many quarter litre cups will the milkman sell from a ten litre jerrycan?

19. Write the number represented by the tallies below in Roman numerals.
    ///// ///// ///

20. Add:

	Weeks	Days
	6	4
+	2	5

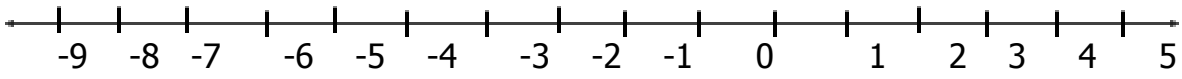
_____

SECTION B: (60 MARKS)

21. (a) Musoke's salary of sh. 240000 was decreased to sh. 192000 per month. Calculate the percentage decrease. *(3 marks)*

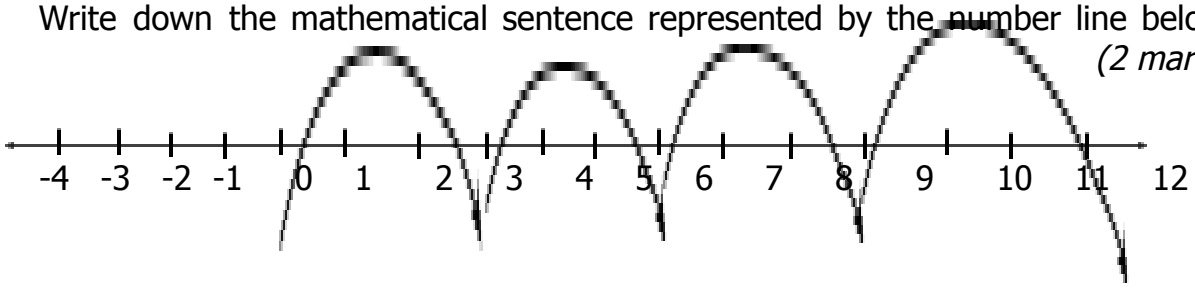
(b) Jane and Barbra shared sh. 904000 in the ratio of 5:3 respectively. How much more did Jane get than Barbra? *(3 marks)*

22. (a) Use a number line to work out. *(2marks)*
$-8 + {}^{+}6$



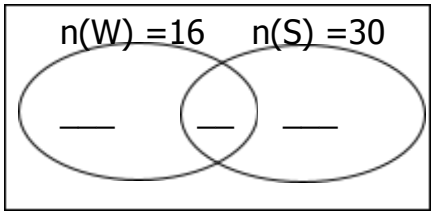
6

(b) Write down the mathematical sentence represented by the number line below. *(2 marks)*



23. At Okello's birthday party, 16 guests took water (W) and 30 guests took soda (S), 10 guests took both water and soda.

(a) Complete the venn diagram below. *(1 mark each)*

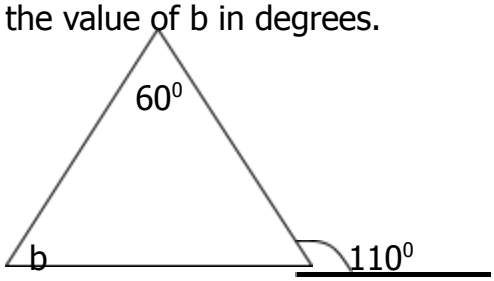


(b) How many guests took only one type of drink? *(1 mark)*

(c) How many guests attended Okello's party? *(1 mark)*

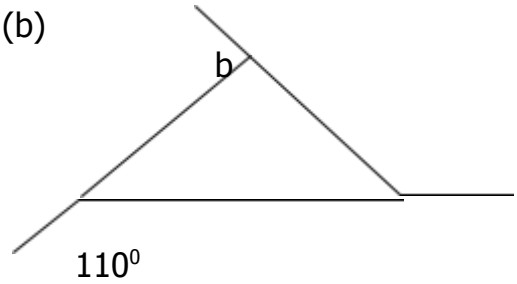
24. Find the value of b in degrees. *(2 marks each)*

(a)



130^0

(b)



25 Amos went shopping and bought the following items:
2 pineapples at sh. 2000 each.
0.5 kg of sugar at sh. 3200 per kg.
1 ½ kg of meat at sh. 8000 per kg.
1 bunch of Matooke at sh. 18000.

(a) How much money did he spend altogether? *(4 marks)*

(b) If he had a fifty thousand shillings note, what was his change? *(2marks)*

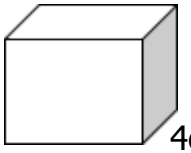
26. (a) David is 20 years older than James. In five years time, David will be twice as old as James. How old is David now? *(2 marks)*

(b) A man earns sh. 4000 less than his wife daily. Their total income is sh. 12000.

(i) How much does the wife earn daily? *(2 marks)*

(ii) How much does the man earn daily? *(2 marks)*

27 Using a ruler, a pencil and a pair of compasses only, construct a regular pentagon. *(4 marks)*

28. 

The volume of a box is 180cm^3.

(a) Find its height. *(2 marks)*

(b) Find its total surface area. *(2 marks)*

29. (a) Work out: $\dfrac{0.072 + 0.018}{0.45 - 0.35}$ *(3 marks)*

(b) Simplify: $\dfrac{5}{7} \div \dfrac{1}{2} + \dfrac{1}{3}$ *(3 marks)*

30 Complete the magic square below. *(5 marks)*

13	a	11
c	b	12
d	14	7

31. A motorist travelled at 40km/hr for 3 hours. He rested for 1 hour and continued his journey at 90km/hr for 2hrs. Calculate the average speed for the whole journey. *(5 marks)*

32. *The table below shows malaria patients who reported at a certain hospital in the first half of the year. Study it and answer the questions that follow.*

Months of the year	Jan	Feb	March	April	May	June
Number of patients	50	30	25	30	40	65

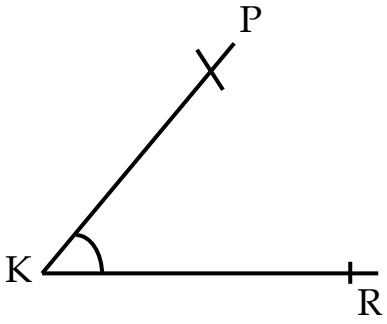
(a) Draw a circle chart of 3.5cm in the space below to represent the above information. *(5 marks)*

7. Write the afternoon time shown on the clock face below.

_____

8. A trader bought an article at shs. 93,000 and later sold it at shs. 104,000. Find the profit the trader made.

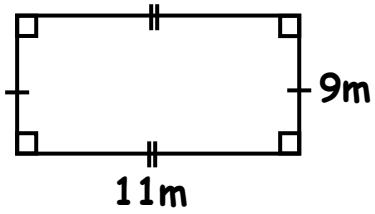
9. With the help of a protractor, measure the small angle PKR in degrees.



10. Express 0.181818…….. as a common fraction in its form.

11. Arrange $^{-}3$, $^{+}4$, $^{-}2$, 0 , $^{+}3$ in descending order.

12.The figure below is a rectangle. Work out its perimeter.



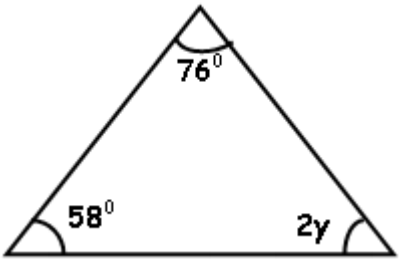
13.Work out the value of 8 in the number 16.485.

14.Given that K = { a , b , c , d } . How many subsets does set K have?

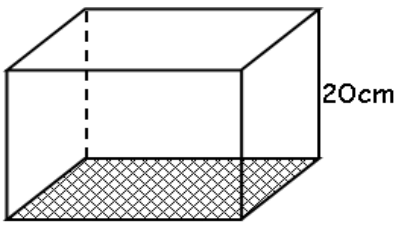
15.Find the square root of 144.

16. Write **CXCVII** in Hindu -Arabic numerals.

17.In the figure below, find the value of **y** in degrees.



18.The area of the shaded part of the rectangular prism below is 80cm^2.
Work out its volume.

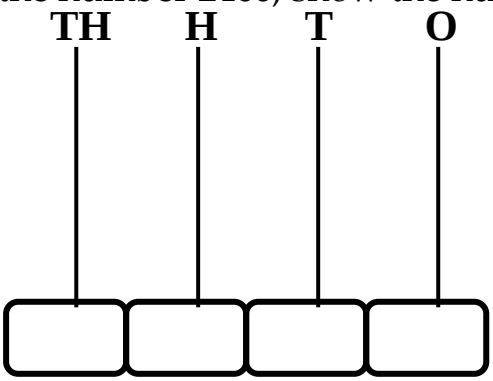


19.Set A = { 1, 3 ,4 , 6 , 7 } and Set Q = { 0 , 6 , 9 , 12 } . Find n (A ∪ Q)

20.Change 201_{three} to base ten.

SECTION B 12 QUESTIONS (60 MARKS)

21. a) Given the number **2460**, show the number on the abacus below. ***(2 marks)***



b) Round off the given number to the nearest hundreds. ***(1 mark)***

c) Write the given number in standard form. ***(2 marks)***

22.A family eats a total of 63 bananas for three consecutive days. It eats one more banana than the previous day.

a) If k bananas are eaten on the first day, find the value of k. ***(3 marks)***

b) How many bananas are eaten on the third day? *(2 marks)*

23. At Peak Primary School, a learner scored the following marks in a series of exams: **90 , 80 , 60 , 70 and 80**

a) Find the modal mark. *(1 mark)*

b) Calculate the range in the learner's scores. *(2 marks)*

c) Work out the learner's average score. *(2 marks)*

24. Akello bought the following items from a market.

2 kg of sugar at shs. 4,000 a kg

$\frac{1}{2}$ kg of meat at shs. 14,000 per kg

12 tomatoes at shs. 1,000 for every 3 tomatoes

10 oranges at shs. 3,000

a) How much money was spent altogether? *(4 marks)*

b) If Akello remained with shs. 18,000 after buying all the items, how much money did she have at first? ***(1 mark)***

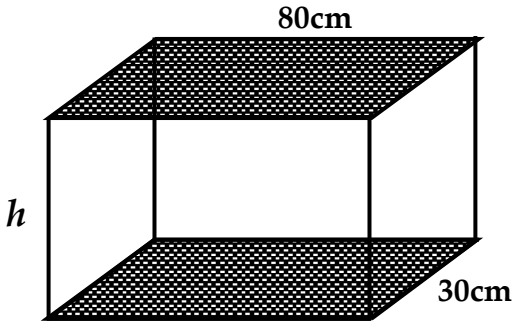
25.a) Work out : $\frac{3}{4} \div 1\frac{1}{4} \text{ X } \frac{5}{9}$ ***(2 marks)***

b) Simplify : $\frac{0.72 \; X \; 1.2}{0.4 \; X \; 0.9}$ ***(2 marks)***

26.a) With the help of a sharp pencil, a ruler and a pair of compasses only, construct a triangle **MTN** such that **MT** =6cm , angle **NMT** = 60^0 and line **MN** = 8cm. ***(4 marks)***

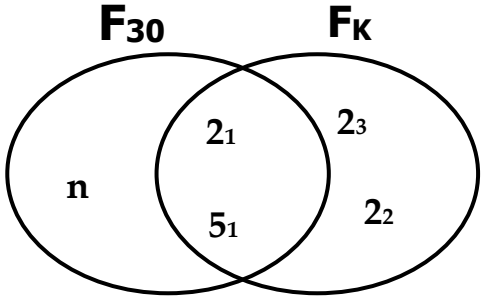
b) Measure length of line NT……***(1 mark)***

27. a) The tank below has a volume of 24000 cm^3. Find its height, ***h***. ***(2 marks)***



c) Calculate the total area of the shaded faces. ***(3 marks)***

28. The Venn diagram below shows the prime factors of **30** and **K**. Study it carefully and use to answer the following questions.



a) Find the value of ; ***(3 marks)***

i) n

ii) k

b) Work out the; ***(3 marks)***

i) GCF of K and 30

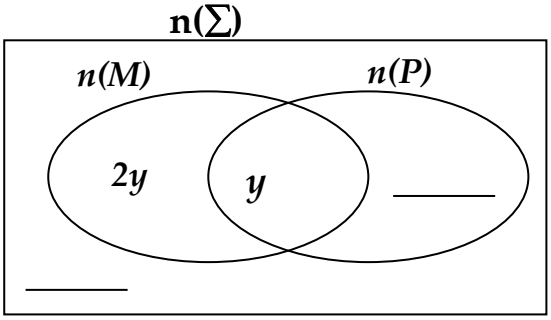
ii) LCM of k and 30

29.a) A man is 9 years older than his wife. If their total age is 75 years. Find their ages. ***(3 marks)***

b) Find the man's age 5 years ago. ***(1 mark)***

30. At a birthday party attended by guests . ***2y*** guests took Mirinda (M) only , (***y+ 10)*** guests took Pepsi (P) only , ***y*** guests took both Mirinda and Pepsi while 2 guests took none of the twoo drinks.

a) Complete the Venn diagram below. ***(2 marks)***



b) If ***32 guests*** took pepsi altogether, find the value of ***y***. ***(2 marks)***

c) How many guests attended the party? ***(1 mark)***

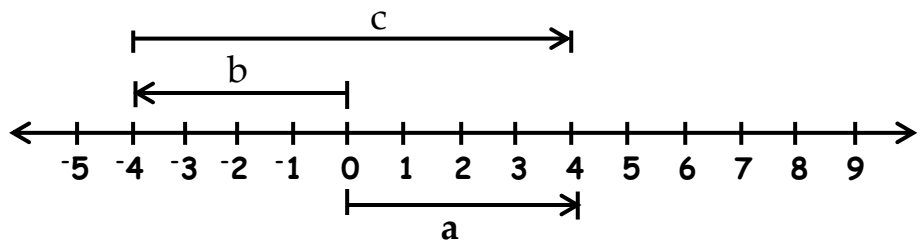
31. A motorist left town T at 3:00 p.m and reached town R at 5:00 p.m after travelling at an average speed of 84 km/hr.

a) How long did the motorist take to travel from town T to town R? ***(2 marks)***

b) Find the distance between town T and town R. ***(2 marks)***

c) Write the time the motorist arrived at town R in 24 hour clock system. ***(1 mark)***

32. Use the number line below to answer questions that follow.



a)

b)

a) Write the integers represented by; ***(3 marks)***

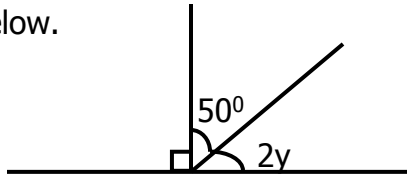
i. Arrow a …….

ii. Arrow b…….

iii. Arrow c …….

b) Write the mathematical statement represented on the number line. ***(1 mark)***

SECTION A: 40 MARKS

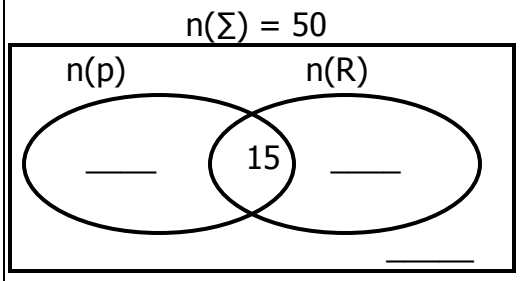
1.	Work out: 34 x 3	2.	Write XCIX in Hindu Arabic numerals.
3.	Simplify: $a^6 \div a^3$	4.	How many ¼ kg packets of sugar can be got from 20kg?
5.	Find the square root of $1\frac{7}{9}$	6.	Find the size of angle y in the figure below. 
7.	Musa deposited sh.400,000 in the bank that offers an interest rate of 5% per month for 1 ½ years. Find his interest.	8.	Change 20m/s to kilometers per hour.
9.	Convert 14 40hour to a 12 – hour clock system.	10.	Using a ruler and a pair of compasses only, construct an angle of 45^0.

11.	Express 34_{five} into binary base.	12.	A man bought a watch at sh.25,000 and later sold it at sh.30,000. Calculate his percentage profit.
13.	Work out: 2 – 5 = _____ (mod 6)	14.	Find the smallest number of mangoes that can be divisible by 6 or 9 pupils and leaves 2 as a remainder.
15.	Calculate the range of -8 and -1.	16.	Solve: 3a – 6 = a + 4
17.	A lady had sh.27,000 in her bag. She spent $\frac{4}{9}$ on meat. How much money did she remain with?	18.	The circumference of a circle is 88m. find its radius (Take π as $\frac{22}{7}$)
19.	If 8 girls can take 5 days to do a piece of work. How many more days can 4 girls take to do the same piece of work?	20.	There are 31 proper subsets in set D. How many members can be got from set D?

SECTION B: 60 MARKS

21. In a class of 50 pupils, h like Posho(P), 25 like rice ®, 15 like both posho and rice while 5 pupils do not like any of the two types of food.

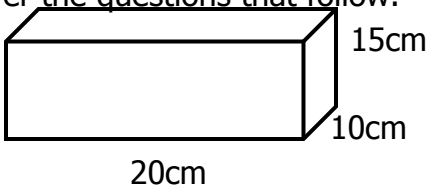
a) Complete the Venn diagram below. (3mks)



b) Find the value of h. (2mks)

c) How many pupils do not like posho? (1mk)

22. The figure below is a cuboid. Use it to answer the questions that follow.



a) How many litres of water can the figure above hold when it is completely full? (2mks)

b) Work out the total surface area of the figure above. (2mks)

23. Two bells ring at the intervals of 30 minutes, 40 minutes respectively. If they rang together at 10:50am,

a) After how long will the two bells ring together again? (3mks)

b) At what time will the two bells ring together again? (2mks)

24. a) Using a ruler and a pair of compasses only, construct a triangle ABC in which AB =7cm, AC=5cm and angle BAC = 120^0. (4mks)

b) Measure the line BC. (1mk)

25. The table below shows the marks scored by pupils in a mathematics test.

Marks scored	80	70	90	60
Number of pupils	2	3	1	4

a) How many pupils sat for the test? (2mks)

b) Work out the mean score of their marks. (3mks)

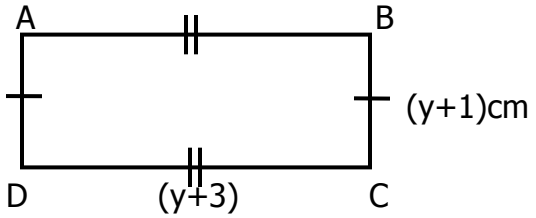
26. Mary went to the market and bought the items as shown on the table below.

Item	Quantity	Unit price	Total cost
Sugar	……kg	Sh.3,000per kg	Sh. 9,000
Meat	2kg	Sh. 10,000 per kg	Sh. ……
Milk	1 ½ litres	Sh…….each litre	Sh. 4,500
Bread	3 loaves	Sh. ……@loaf	Sh. 13,500
	Total expenditure		Sh. ……..

a) Complete the table above. (5marks)

b) If she was given a discount of 10%, how much money did she pay? (1mk)

27. The perimeter of the rectangle below is 28cm. study it carefully and use it to answer the questions that follow.

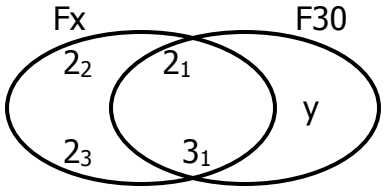


a) Find the value of y. (2mks)

b) Work out the area of the figure above. (2mks)

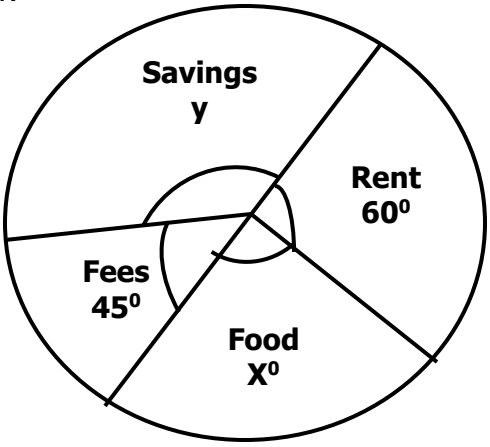
28. In a school, $\frac{2}{3}$ of the pupils are boys. One day, $\frac{1}{8}$ of the boys and $\frac{1}{16}$ of the girls were absent. If 1050 pupils were absent that day, how many pupils were present?

29. The Venn diagram below represents the prime factors of two numbers. Use it to answer the questions that follow.



a) Find the value of x. (2mks)

	b) Calculate the value of y. (2mks) c) Work out the LCM of X and 30 (2mks)
30.	a) Solve: $2(2a + 4) – 2(a – 2) = 0$ (2mks) b) If p = 3, q = -4 and r = 2, find the value of $\frac{pr – q}{P – q}$ (2mks)
31.	Moses, Timothy and Robert shared a certain amount of money in the ratio of 2:3:5 respectively. If Robert got sh.60,000 more than Moses, a) How much money did they share altogether? (4mks)

	b) What percentage of the money did Timothy get? (1mk)
32.	The pie – chart below shows Muzorewa's monthly expenditure. Use it to answer the questions that follow.  a) Find the value of y in degrees. (2mks) b) Work out the size of angle marked x. (2mks) c) If he spends sh.180,000 on rent, find his monthly income. (2mks)

END

SECTION A (40 MARKS)

1. Subtract 69 from 85.

2. Given that Set W = {e,f,g.h}, how many subsets can be formed from set W?

3. Write 40,094 in words.

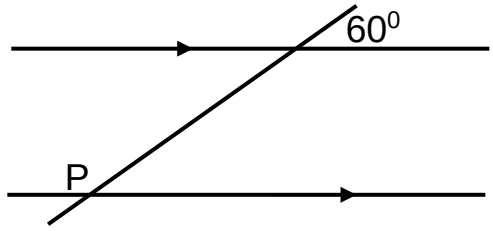
4. Musana had $\frac{3}{4}$ of the cake and served $\frac{1}{3}$ of it to his friend Hannah. What fraction of the cake did he remain with?

5. Find the mean of 2a + 3, 3a and a+6.

6. Joshua invested shs. 600,000 in a bank that pays simple interest at a rate of 2% per month. Calculate the simple interest he received after 4 months.

7. Simplify: $^{-}4 - {}^{+}6$.

8. In the figure below, find the value of P in degrees.



9. Using a ruler, a pencil and a pair of compasses, construct an angle of 75^0.

10. Waswa was the 9^{th} boy from either side of the line. How many boys were on the line?

11. Round off 468.49 to the nearest tenths.

12. The total distance around a quadrant is 39dm. find its radius.

13. Express 50m/sec into km/hr.

14. The area of a square garden is 144cm^2. Calculate the length of each side of the garden.

15. Workout: 0.75 x 0.4

16. Express 0.5454… as a vulgar fraction.

17. The range of consecutive integers is 6. List the highest integers in descending order.

18. Simplify 4.36 – 8.74 + 6.47.

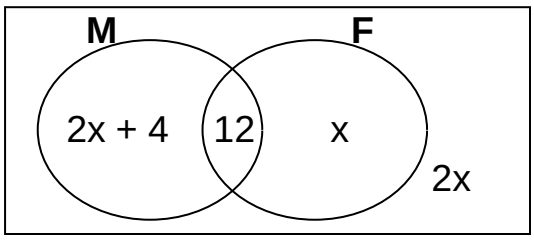
19. Express 994 in Roman numerals.

20. Find the least number of oranges that can be shared by a group of 18 boys or 15 girls leaving no remainder.

SECTION B

Answer all questions in this section

21. The venn diagram below shows number of pupils in P.7 class who eat meat (M) and Fish (F).



a) If the total number of pupils in P.7 class were 56. Find the value of x.

b) How many pupils eat fish altogether?

c) If a pupil is picked at random to clean the black board. What is the probability of picking a pupil who does not eat any of the two?

22. During an interview, 5 marks were awarded for every correct answer given and two marks were deducted for every wrong answer given. It consisted of twenty questions.

a) If Alice passed only 16 questions, how many marks did she get? (2marks)

b) If Moses scored 79 marks, how many questions did he answer correctly? (3marks)

23. a) If today is Thursday. What day of the week was it 115 days ago?

b) Martha is 18 years older than her brother Tom. In 10 years' time, Martha will be twice as old as Tom. How old is Martha now?

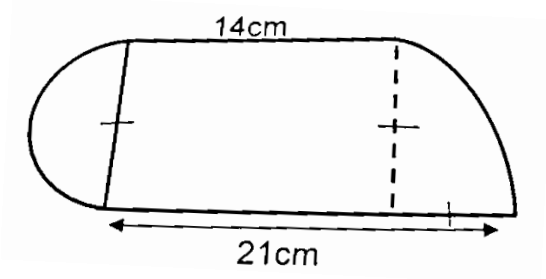
24. Mathew went shopping and bought the following items from Heer supermarket
    - 2kgs of beans at shs. 1500 per kg
    - 500gm of salt at shs. 12,000 a kg
    - 2 ½ kg of sugar at shs. 4,000 each
    - 30 tomatoes at shs. 500 for every 3 tomatoes

    a) Find his total expenditure.

    b) If he was given a distance of shs. 1500. How much did he pay?

25. In a school, 40% were boys and there were 720 girls last year. This year, the number of girls increased by 15% and the number of boys increased in the ratio of 9:8. How many pupils are in the school this year altogether?

26. a) Below is a flower garden. Find its perimeter (Use $\pi = 3\frac{1}{7}$)



b)The length of a wire wound round the cylindrical tin 200 times is 88 metres. Find the diameter of the tin.

27. Complete the Magic square below by showing the working

9	____	5
____	8	____
____	____	7

28. The sum of interior angles of a regular polygon is 1080^0.

a) Calculate the size of its interior angle.

b) Find its number of right angles.

29. Given that $9 \leq 3x \leq 21$ and x is whole number

a) Solve for x.

b) Write a solution set form x.

30. A driver left town A at 8:00am and reached town B at 10:30am moving at a speed of 60km/hr. He then left town B for C and covered a distance of 90km in 1 hour and 30 minutes.

a) Find the distance covered by the driver from town A to town B.

b) Calculate the average speed for the whole journey.

31. a) Solve for x in $4x + 2 = 5 \pmod 7$

b) The table below represents addition of numbers in base six. Complete it

+	3	4
2	5	___
4	___	___

32. A school van uses 3 litres of fuel to cover a distance of 48km.
    a) How much fuel in litres does it use for a journey of 120km? (3marks)

    b) If 2 litres of fuel cost shs. 77 00, how much money is needed to cover the distance of 120km? (2marks)

SECTION A (40 MARKS)

1. Subtract 69 from 85.

2. Given that Set W = {e,f,g.h}, how many subsets can be formed from set W?

3. Write 40,094 in words.

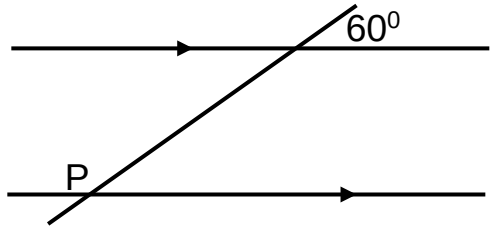
4. Musana had $\frac{3}{4}$ of the cake and served $\frac{1}{3}$ of it to his friend Hannah. What fraction of the cake did he remain with?

5. Find the mean of 2a + 3, 3a and a+6.

6. Joshua invested shs. 600,000 in a bank that pays simple interest at a rate of 2% per month. Calculate the simple interest he received after 4 months.

7. Simplify: $^{-}4 - {}^{+}6$.

8. In the figure below, find the value of P in degrees.



9. Using a ruler, a pencil and a pair of compasses, construct an angle of 75^0.

10. Waswa was the 9^{th} boy from either side of the line. How many boys were on the line?

11. Round off 468.49 to the nearest tenths.

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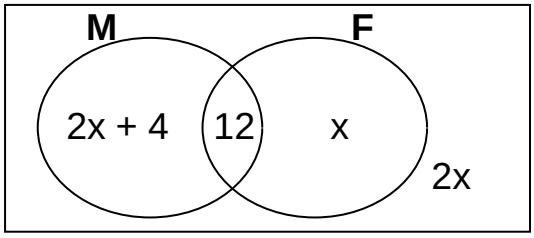
19. Express 994 in Roman numerals.

20. Find the least number of oranges that can be shared by a group of 18 boys or 15 girls leaving no remainder.

SECTION B

Answer all questions in this section

21. The venn diagram below shows number of pupils in P.7 class who eat meat (M) and Fish (F).



a) If the total number of pupils in P.7 class were 56. Find the value of x.

b) How many pupils eat fish altogether?

c) If a pupil is picked at random to clean the black board. What is the probability of picking a pupil who does not eat any of the two?

22. During an interview, 5 marks were awarded for every correct answer given and two marks were deducted for every wrong answer given. It consisted of twenty questions.

a) If Alice passed only 16 questions, how many marks did she get? (2marks)

b) If Moses scored 79 marks, how many questions did he answer correctly? (3marks)

23. a) If today is Thursday. What day of the week was it 115 days ago?

b) Martha is 18 years older than her brother Tom. In 10 years' time, Martha will be twice as old as Tom. How old is Martha now?

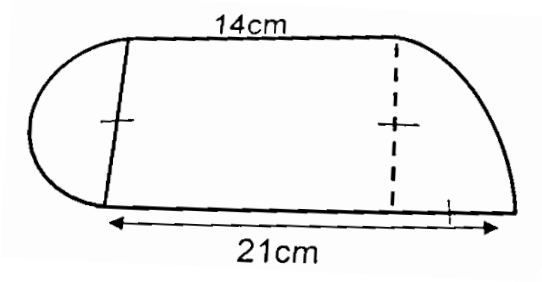
24. Mathew went shopping and bought the following items from Heer supermarket
    - 2kgs of beans at shs. 1500 per kg
    - 500gm of salt at shs. 12,000 a kg
    - 2 ½ kg of sugar at shs. 4,000 each
    - 30 tomatoes at shs. 500 for every 3 tomatoes

    a) Find his total expenditure.

    b) If he was given a distance of shs. 1500. How much did he pay?

25. In a school, 40% were boys and there were 720 girls last year. This year, the number of girls increased by 15% and the number of boys increased in the ratio of 9:8. How many pupils are in the school this year altogether?

26. a) Below is a flower garden. Find its perimeter (Use π = $3\frac{1}{7}$)



b)The length of a wire wound round the cylindrical tin 200 times is 88 metres. Find the diameter of the tin.

27. Complete the Magic square below by showing the working

9	____	5
____	8	____
____	____	7

28. The sum of interior angles of a regular polygon is 1080^0.
a) Calculate the size of its interior angle.

b) Find its number of right angles.

29. Given that $9 \leq 3x \leq 21$ and x is whole number

a) Solve for x.

b) Write a solution set form x.

30. A driver left town A at 8:00am and reached town B at 10:30am moving at a speed of 60km/hr. He then left town B for C and covered a distance of 90km in 1 hour and 30 minutes.

a) Find the distance covered by the driver from town A to town B.

b) Calculate the average speed for the whole journey.

31. a) Solve for x in $4x + 2 = 5 \pmod 7$

b) The table below represents addition of numbers in base six. Complete it

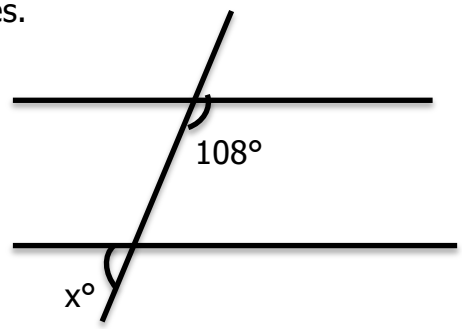
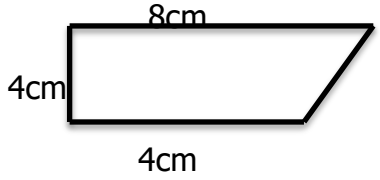
+	3	4
2	5	___
4	___	___

32. A school van uses 3 litres of fuel to cover a distance of 48km.
    a) How much fuel in litres does it use for a journey of 120km? (3marks)

    b) If 2 litres of fuel cost shs. 77 00, how much money is needed to cover the distance of 120km? (2marks)

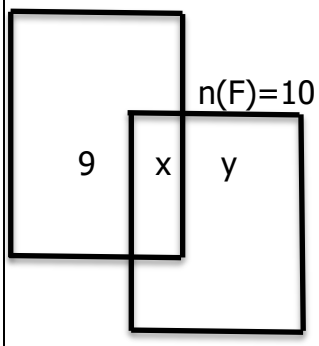
END

1.Add 0.4 + 0.8	2.	Find the next number in the sequence. ½ ,1/4 , 1/8 , 1/16_____, _____
3.In a class of 36 pupils, 12 are girls and the rest are boys.What is the probability that the pupil selected at random will be a boy?	4.	A trader bought a bull at sh.100,000 and sold it at sh.125,000.What was his percentage profit?
5.Work out ¼ ÷3/5	6	A bus broke down after covering 5/7 of the journey.The remaining distance to complete the journey was 140km.How long was the journey?
7.Find the square root of 144	8.	If 1/3 of Gala's salary is sh.16000, What is his salary?

9.If ⊕ represents 1500 pupils in a School,Find the number of pupils represented by ⊖	10	Find the value of x in the figure below in degrees. 
11.Simplify: +8_-2	12	A wheel of a bicycle has a aradius of 7cm.How many revolutions will the wheel make in a distance of 50 metres?
13.Find the area of the figure below  	14.	If the cost of buying 300 Kenyan shillings is 600 Uganda shillings,how many Kenya shillings are in 42,000 Uganda shilling

15.Simplify 2x + 4y + 3x + 5y	16	What is 2 – 5 in finite 7?
17.Write 949 in Roman numerals	18	Change 0.045kg to grams
19.What number has been expanded. $(2x10^{1})+(4x10^{2})+(3x10^{o})+(5x10^{-1})$		20.Calculate the principal that will yield an interest of sh.7200 in 5years at 6% per annum.
SECTION B 21a)Find the smallest number of books that be divided by 12 boys or 16 girls and leaves a remainder of 2 books.	b)	Find the GCF of 24 and 18

22a)Mukasa's car uses 8litres of petrol for every 50km.How much petrol does he need for a journey of 325km?	b	If one litre of petrol costs sh.5426, how much money will he spend on petrol needed to run the car for 1½ hours at a speed of 50km/hr?
23a)Given that 2/3 of Annet's salary is equal to ¾ of Mary's salary.Find Annet's salary if mary's salary is sh.120,000.	23b	Express Mary's salary as a fraction of Annet's salary.
24a) Simplify $\frac{0.32 \times 1.2}{0.016}$	24b	Find the multiplicative inverse of 2/3

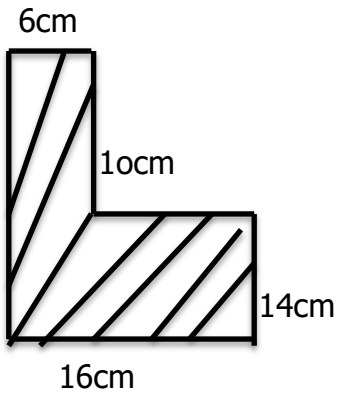
25.Ndorwa West county has a population of 300,000 people.Of these 3/5 are females and 5/6 of the females are girls. a)If 2/3 of the males among the population are boys,find the ratio of boys to girls.	b	What is the total number of boys and girls in the county?
26.Using a ruler , a pencil and a pair of compasses only, construct a parallelgram KLMN in which KL=4cm,LM=6cm and angle NKL=60°	26b	Measure the length of diagonal KM
	27.	Study the venn diagram below n(T)=12 n(F)=10 

a)Find the value of x. b)Find the value of y c)Find n(TUF) 28.At a forex bureau,the exchange rates are as follows. US dollar 1=Ug sh.4000 Ksh.1= Ug sh.30. a)A tourist came to Uganda with 50US dollars and 40Ksh.Find the total amount of money in Uganda shillings the tourist will get from the forex bureau.	28b 29a)	If a goat costs 30 US dollars,what will be the cost of the goat in Kenyan shillings(ksh.) The average age of 5men in a society was 40years.Three men aged 30, 21, and 39 left the society.Find the average age of the remaining men in the society.

29b)In a class the sum of marks obtained by all pupils is 300.If the mean score was 15.Find the number of pupils in the class

c)The mean attendance for 3 days is 20.What is the total attendance for three days?

30.The diagram below shows a lawn



a)Find the area of the lawn

30b Find the cost of clearing the lawn at sh.5000 per square metre.

31 Jane bought the following items from the market.

3kg of sugar at sh.1400 per kg

1½kg of rice at 4000 per kg

2½ litres of paraffin at sh.3500 per litre.

8 oranges at sh.200 per orange.

If Jane remained with only sh.5000,find the total amount of money she had.

32.A bus left Kampala for Masaka town with 60 passengers.At Mpigi 15 got out,at Buwama 8 boarded and at Lukaya 12 got out.It then travelled straight to Masaka town and the rest of the passengers got out. a)How many passengers reached Masaka town?	b	How much money was collected from those who reached Lukaya if each paid sh.15000. **END AND GOOD LUCK**

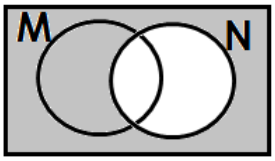
SECTION A

1. Add: 32 + 24

2. Mary had 20 litres of liquid soap. She gave each child 1/2 litres. How many children did she give?

3. Simplify: m - 8m + 8m

4. Study the diagram below and describe the shaded part.

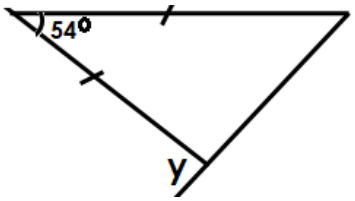


5. Fill in the last two numbers

   0, 1, 5, 14, 30, ____, ___

6. Subtract: $2\ 0\ 3_{five}$
   $-\ 1\ 4_{five}$

7. The points below were scored by different teams in a tournament.
   6, 2, 3, 8, 9, 3, 4, 9 find the median score.

8. 

   Calculate the value of y in degrees.

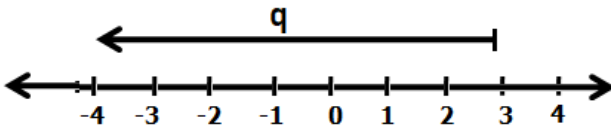
9. Peter got 2½% in a maths contest. What fraction of the work did Peter get?

10. The circumference of a church's circular compound is 44m. Find its radius.

11. Study the figure below and answer the questions that follow.

Tell the afternoon time shown on the clock face.

12. Name the integer shown by the arrow diagram on the number line.



13. Prime factorise 36 and write all the prime factors in set notation.

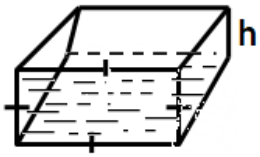
14. A pack of 53 playing cards has 4 kings, 4 queens, 4 jacks and 4 aces and others. What is the chance of picking a queen at random?

15. Write 414 in Roman Numerals.

16. A quarter a dozen of pens cost sh.4500. Find the cost of 4 similar pens.

17. Using a ruler, a pair of compasses and a pencil only, construct an angle of 75^{o}.

18. The volume of a cuboid below is $72cm^{3}$. Find the height if the base is $24cm^{2}$



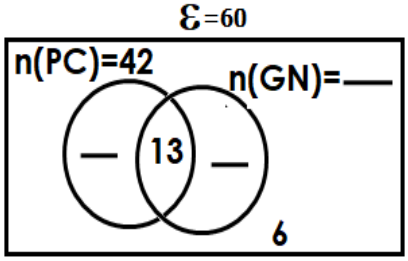
19. The school fees in school A in Gulu city is Three times that one of B. Find the amount of money paid by a child who goes to school B, if the difference in the structure is sh. 600,000.

20. Convert 72km / hr to m/s

SECTION B

21. In a birthday party of a class prefect in P.7B, 60 students were invited. 42 were served with popcorns (PC), **r** were served with G.nuts (GN), 6 did not take any and 13 were served with both eats. (3mks)

a) Represent the above information in the Venn diagram below.



b) How many students like G.nuts? (2mks)

c) Find the number of students who were served with one type of eats. (1mk)

22. a) Given that x = ¯3 and y=4. Find the value of $\frac{3x + 2y}{2x - y}$ (3mks)

b) Solve for n: $3n - 5 = 7$ (2mks)

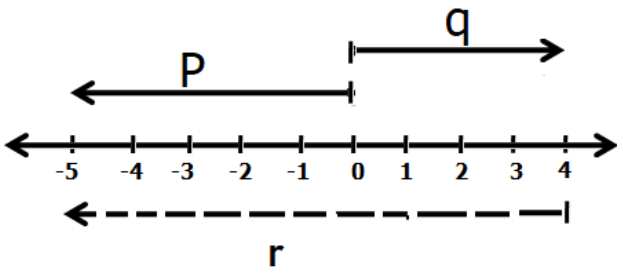
23. a) Workout: $\frac{0.021 \times 7.2}{0.9 \times 0.035}$ (3mks)

b) Express 0.3636.. as a fraction to its lowest term. (3mks)

24. Given the equation of the line as $x = 2y + 1$. Complete the table below. (5mks)

X	1	___	5	____	9
Y	____	1	___	3	____

25. Use the number line below to answer the questions that follow.



arrows. (1mk)

q =

p =

r =

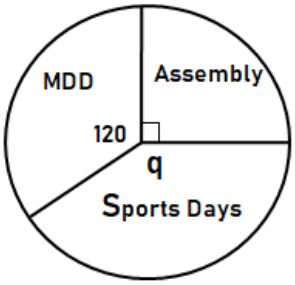
b) Write the mathematical sentence represented above. (2mks)

26. The interior angle of a regular polygon is five times the exterior angle.

a) Find the exterior angle, the sides and name the polygon. (4mks)

b) Calculate the interior angle sum of the regular polygon. (2mks)

27. The pie chart shows how a Headteacher of a school spends his monthly collections.



a) Find the angle sector for sports day. (2mks)

b) How much does he spend on MDD if the total collection is shs. 480,000/=

c) Express the money planned for assembly as a percentage of the total collection.

28. Teo planted ½ of the land on a Thursday. ¼ of the remainder on Friday. If she completed $24m^2$ on Saturday, how big was the whole land in sq.meters. (5mks)

29. Toto went shopping with 3 notes of sh.20000 each and bought the following items.

- 3kg of sugar at sh.4000 per kg
- 4kg of rice at sh.14,000
- 4 tablets of soap at 5000/= per tablet.

a) Find Toto's total expenditure. (4mks)

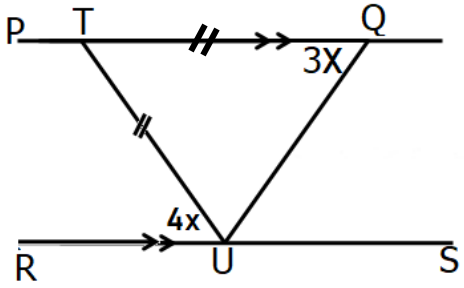
b) If she used sh.2000 for transport, how much money was she left with. (1mk)

30. Using a ruler, a pair of compasses and a pencil only construct an equilateral triangle ABC of side 4.5cm. (4mks)

b) Measure angle ACB. (1mk)

31. The GCF and the LCM of two numbers are 6 and 72 respectively if the first numbers is 24. Find the 2nd number. (3mks)

32. In the diagram below, line $\overline{PQ}$ and line RS are parallel to each other $\overline{TU} = \overline{TQ}$

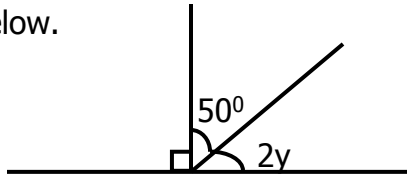


a) Find the value x in degrees.

b) Calculate angle QTU.

-THE END-

SECTION A: 40 MARKS

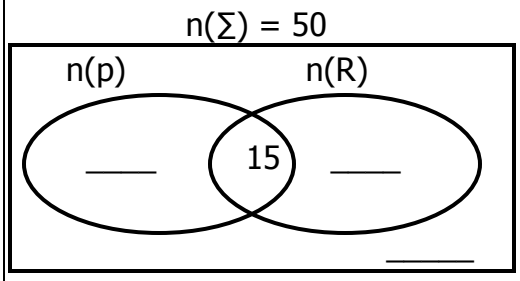
1.	Work out: 34 x 3	2.	Write XCIX in Hindu Arabic numerals.
3.	Simplify: $a^6 \div a^3$	4.	How many ¼ kg packets of sugar can be got from 20kg?
5.	Find the square root of $1\frac{7}{9}$	6.	Find the size of angle y in the figure below. 
7.	Musa deposited sh.400,000 in the bank that offers an interest rate of 5% per month for 1 ½ years. Find his interest.	8.	Change 20m/s to kilometers per hour.
9.	Convert 14 40hour to a 12 – hour clock system.	10.	Using a ruler and a pair of compasses only, construct an angle of 45^0.

11.	Express 34_{five} into binary base.	12.	A man bought a watch at sh.25,000 and later sold it at sh.30,000. Calculate his percentage profit.
13.	Work out: 2 – 5 = _____ (mod 6)	14.	Find the smallest number of mangoes that can be divisible by 6 or 9 pupils and leaves 2 as a remainder.
15.	Calculate the range of -8 and -1.	16.	Solve: 3a – 6 = a + 4
17.	A lady had sh.27,000 in her bag. She spent $\frac{4}{9}$ on meat. How much money did she remain with?	18.	The circumference of a circle is 88m. find its radius (Take π as $\frac{22}{7}$)
19.	If 8 girls can take 5 days to do a piece of work. How many more days can 4 girls take to do the same piece of work?	20.	There are 31 proper subsets in set D. How many members can be got from set D?

SECTION B: 60 MARKS

21. In a class of 50 pupils, h like Posho(P), 25 like rice ®, 15 like both posho and rice while 5 pupils do not like any of the two types of food.

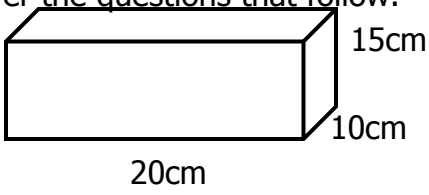
a) Complete the Venn diagram below. (3mks)



b) Find the value of h. (2mks)

c) How many pupils do not like posho? (1mk)

22. The figure below is a cuboid. Use it to answer the questions that follow.



a) How many litres of water can the figure above hold when it is completely full? (2mks)

b) Work out the total surface area of the figure above. (2mks)

23. Two bells ring at the intervals of 30 minutes, 40 minutes respectively. If they rang together at 10:50am,

a) After how long will the two bells ring together again? (3mks)

b) At what time will the two bells ring together again? (2mks)

24. a) Using a ruler and a pair of compasses only, construct a triangle ABC in which AB =7cm, AC=5cm and angle BAC = 120^0. (4mks)

b) Measure the line BC. (1mk)

25. The table below shows the marks scored by pupils in a mathematics test.

Marks scored	80	70	90	60
Number of pupils	2	3	1	4

a) How many pupils sat for the test? (2mks)

b) Work out the mean score of their marks. (3mks)

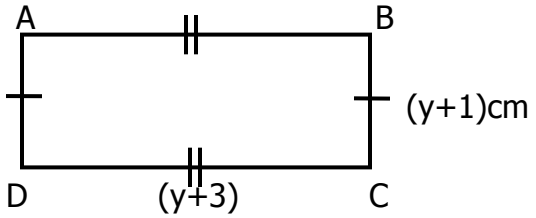
26. Mary went to the market and bought the items as shown on the table below.

Item	Quantity	Unit price	Total cost
Sugar	……kg	Sh.3,000per kg	Sh. 9,000
Meat	2kg	Sh. 10,000 per kg	Sh. ……
Milk	1 ½ litres	Sh…….each litre	Sh. 4,500
Bread	3 loaves	Sh. ……@loaf	Sh. 13,500
	Total expenditure		Sh. ……..

a) Complete the table above. (5marks)

b) If she was given a discount of 10%, how much money did she pay? (1mk)

27. The perimeter of the rectangle below is 28cm. study it carefully and use it to answer the questions that follow.

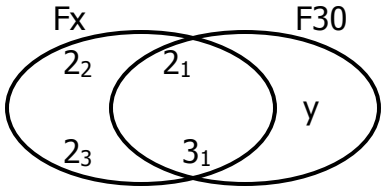


a) Find the value of y. (2mks)

b) Work out the area of the figure above. (2mks)

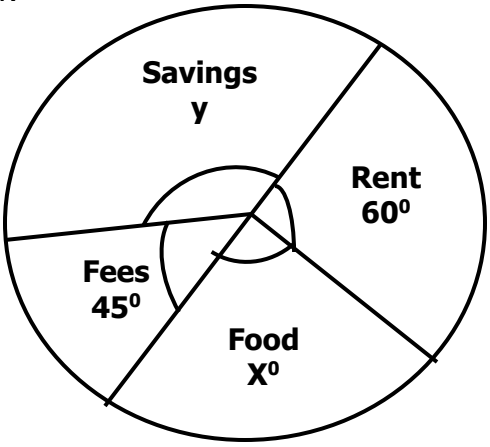
28. In a school, $\frac{2}{3}$ of the pupils are boys. One day, $\frac{1}{8}$ of the boys and $\frac{1}{16}$ of the girls were absent. If 1050 pupils were absent that day, how many pupils were present?

29. The Venn diagram below represents the prime factors of two numbers. Use it to answer the questions that follow.



a) Find the value of x. (2mks)

	b) Calculate the value of y. (2mks) c) Work out the LCM of X and 30 (2mks)
30.	a) Solve: $2(2a + 4) – 2(a – 2) = 0$ (2mks) b) If p = 3, q = -4 and r = 2, find the value of $\frac{pr – q}{P – q}$ (2mks)
31.	Moses, Timothy and Robert shared a certain amount of money in the ratio of 2:3:5 respectively. If Robert got sh.60,000 more than Moses, a) How much money did they share altogether? (4mks)

	b) What percentage of the money did Timothy get? (1mk)
32.	The pie – chart below shows Muzorewa's monthly expenditure. Use it to answer the questions that follow.  a) Find the value of y in degrees. (2mks) b) Work out the size of angle marked x. (2mks) c) If he spends sh.180,000 on rent, find his monthly income. (2mks)

END

SECTION A: 40 MARKS

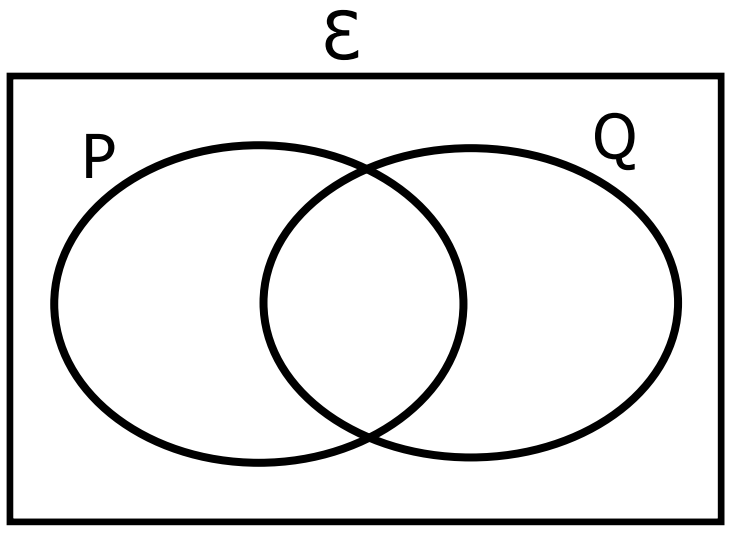
Answer **all** questions in this Section

Questions **1** to **20** carry two marks each

1. Workout:
$$\begin{array}{r} 2\ \ 3 \\ \times\ \ 4 \\ \hline \\ \hline \end{array}$$

2. Correct 6.899 to two decimal places.

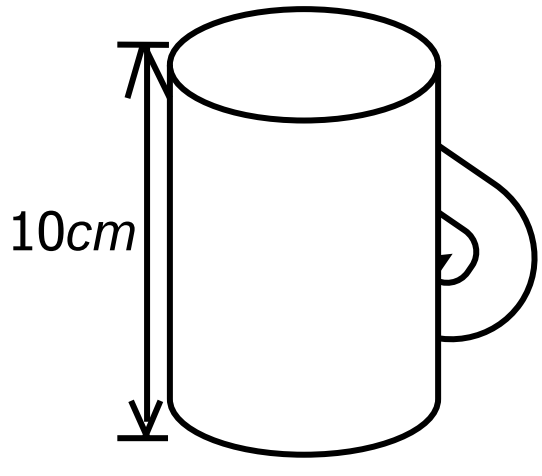
3. In the Venn diagram below, shade $(P-Q)'$



4. Simplify: $18x - 5(3x + 7)$.

5. 4 text books cost Sh.24,000. Find the cost of 8 similar text books.

6. Maama Muzeyi prepared 4.5 litres of milk and served it to the children in an orphanage using the cup with a base area of $9cm^2$ shown below.



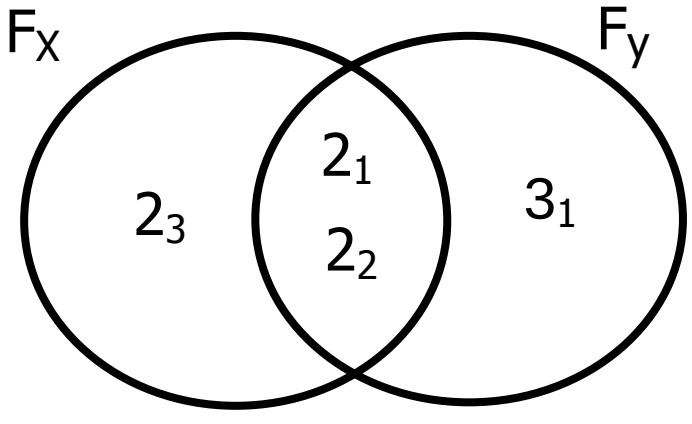
How many children did she serve?

7. Using a ruler, a sharp pencil and a protractor only, draw the supplement of 105^0 in the space below.

8. $\frac{5}{8}$ of water in a tank lasts a school 45 days. How long will $\frac{2}{3}$ of the water in the tank last the school?

Turn Over

9. Factors of **X** and **Y** are given in the Venn diagram below.



Find the value of $F_x \cup F_y$.

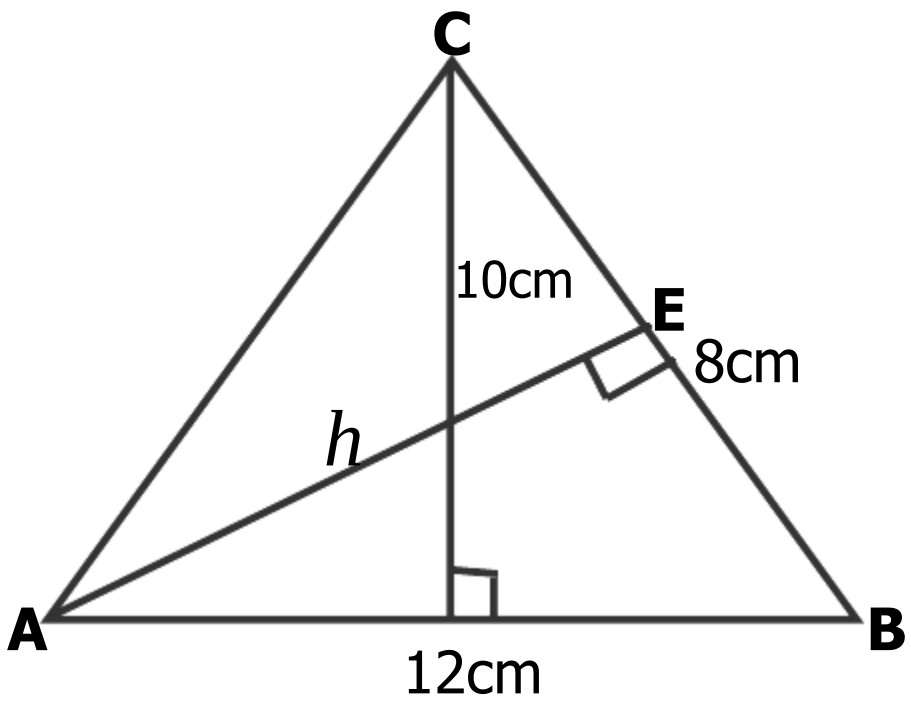
10. Given, $1\ 7_n = 15_{ten}$ find the base represented by n.

11. Without dividing, prove whether 4291 is divisible by 9.

12. A torch uses batteries of 1.5 volts. In order for the torch to work, it requires 12 volts. How many such batteries will the torch require?

13. Workout (42÷6) – (30÷6) using distributive property.

14. Find the length **AE** in the figure below.



15. The probability of Arsenal FC winning a game is $\frac{3}{5}$. If the team wins 9 games, how many games did Arsenal lose that season?

Turn Over

16. The digital clock watch below shows the time Papa set to wake him up for revision in the morning. Use it to fill in the spaces below.

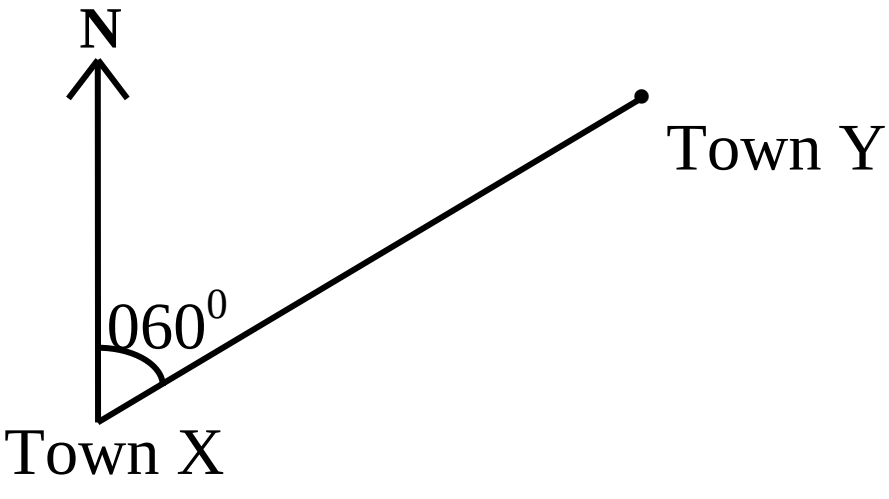
Papa woke up at ……. minutes to ……... o'clock in the morning.

17. Given, $^{-}4$, 3, $^{-}1$, 0 and 2. Arrange in ascending order.

18. The average height of four girls, Sarah, Jane, Mary and Annet is 120cm. Sarah is 100cm and Jane is 130cm tall. Find the height of Mary if Jane is as tall as Annet.

19. Nassiwa is m years but 17 years younger than Reachel. How old is Nassiwa if their total age is 31 years?

20. What is the bearing of **Town X** from **Town Y** in the diagram below?



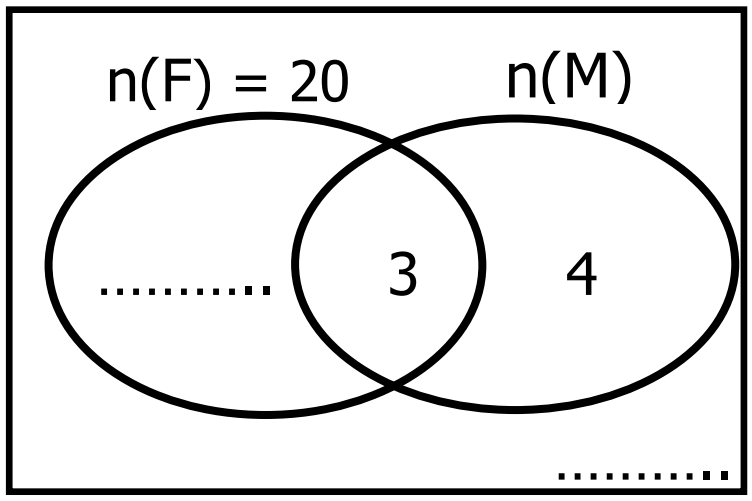
SECTION B: 60 MARKS

Answer **all** questions in this section

Marks for each question are indicated in brackets

21. During a birthday, 20 candidates drank Fanta (F), 4 drank Mrinda (M) only, 3 drank both drinks while 9 candidates did not like Fanta.

(a) Use the above information to complete the Venn diagram below. (02 Marks)



(b) Find the probability of picking a candidate who drank only one type of Soda. (02 Marks)

22. (a) Workout: $\frac{2}{3} - \frac{1}{4} + \frac{1}{6}$. (03 Marks)

(b) Workout: $\frac{2.4 \times 0.6}{0.12}$ (02 Marks)

23. John went for shopping and bought the following items

4 bottles of 500ml of Soda at Sh.2,500 each litre.
500g of salt at Sh.9,000 for every 1½kg.
3 sachets of cooking oil at Sh.3,500 for every 7 sachets.

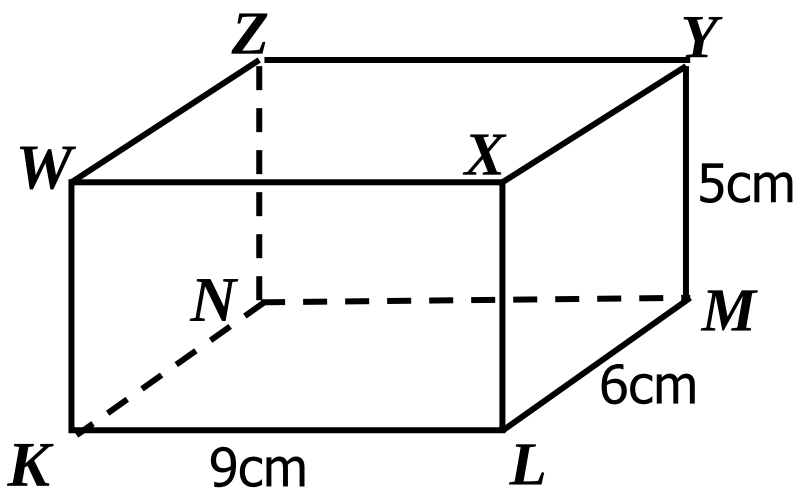
How much did he pay for all the items she bought? (05 Marks)

24. (a) Using a ruler, a pencil and a pair of compasses only, Construct triangle MAP such that AP = 8cm, angle MAP = 120^0 and MA = 6cm. (03 Marks)

(b) Measure length MP _____cm. (01 Mark)

(c) Measure angle APM. _____ (01 Mark)

25. The diagram below shows a cuboid $KLMNWXYZ$ in which $\overline{KL}$ = 9cm. $\overline{LM}$ = 6cm and $\overline{MY}$ = 5cm.



(a) Determine the length of lines KNZ and LMN in cm.

(i) KNZ (01 Mark)

(ii) LMN (01 Mark)

(b) Calculate the area of rectangle $LXYM$. (02 Marks)

(c) Workout the volume of the cuboid $KLMNWXYZ$. (02 Marks)

26. A trader bought 20 watermelons at Sh.2,000 each but x of them got spoilt. He sold the remaining melons at Sh.3,000 each and made a profit of Sh.8,000. Calculate the value of x. (03 Marks)

27. The sums of the values in the table below are the same vertically, horizontally and diagonally. Fill in the missing values to complete the table. (05 Marks)

.....	.....	28	17
25	20	19	.....
.....	24	13	18
26	15	.....	29

28. The table below shows the transport fares charged to the 60 passengers travelling to different areas along Mbarara Road by Link bus.

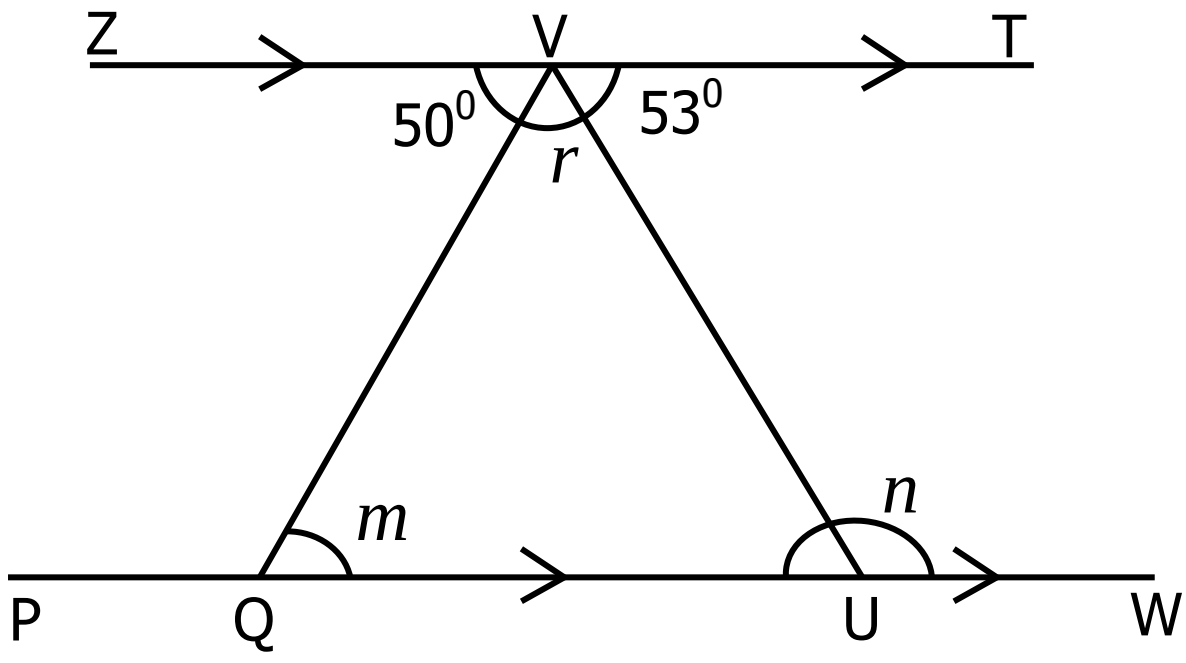
Route	**Transport fare**
Kampala to Lukaya	Sh.10,000
Kampala to Masaka	Sh.12,000
Kampala to Kinoni	Sh.15,000
Kampala to Lyantode	Sh.20,000
Kampala to Mbarara	Sh.25,000

(a) If 6 passengers got out at Lukaya, 18 got out at Masaka and 5 boarded going to Mbarara, then 15 got out when they reached Kinoni. How much money was collected by the bus from Kampala to Kinoni? (04 Marks)

(b) How many passengers reached Mbarara town? (01 Mark)

(c) How much was the DOS supposed to pay if he travelled with 4 other teachers from Kampala to Kinoni? (01 Mark)

29. In the figure below, ZVT is parallel to PQUW. Angle ZVQ = 50^0 and angle TVU = 53^0.

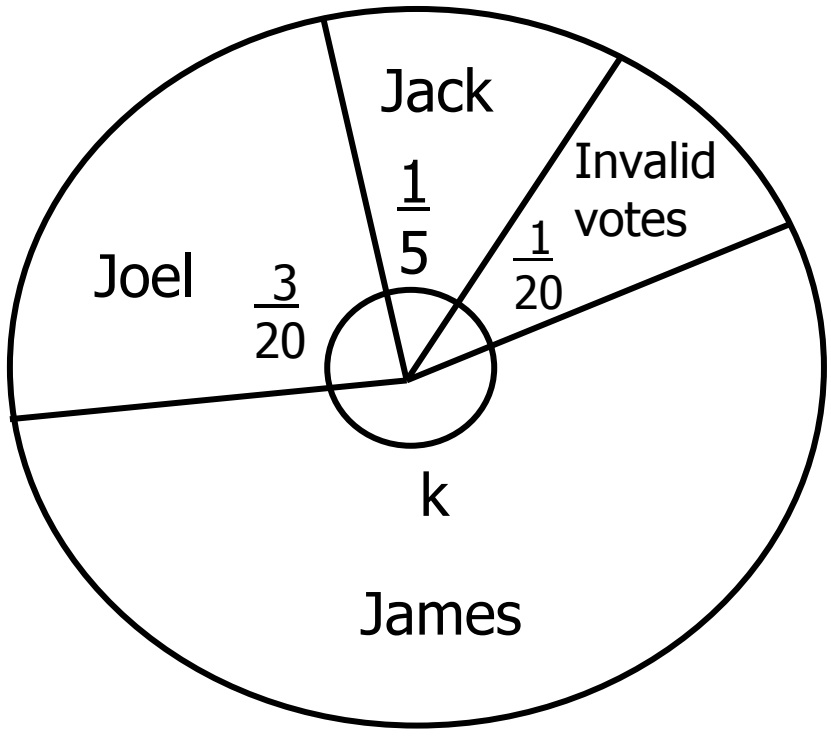


(a) What is the size of angle r in degrees? (02 Marks)

(b) Find the value of n. (01 Mark)

(c) Calculate the size of angle VQU. (02 Marks)

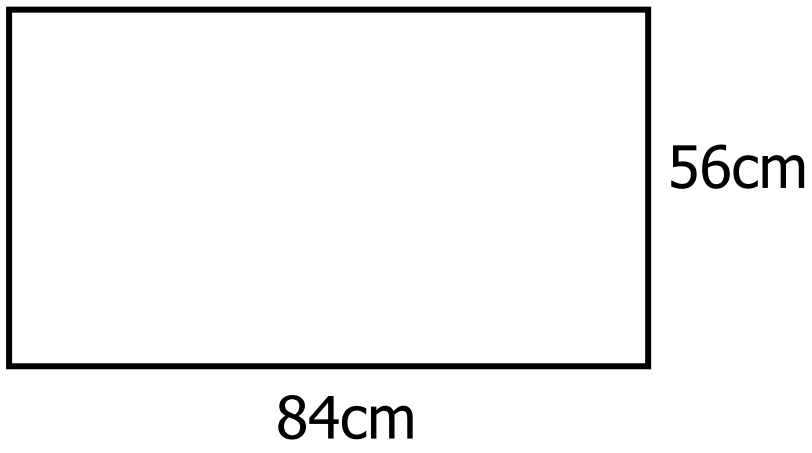
30. The Pie-Chart below shows how each of the 3 boys got the votes in the Prefectorial Elections.



(a) If James got 324 more votes than Joel, how many invalid votes were counted? (05 Marks)

(b) How many votes did Jack get? (01 Mark)

31. Shukuran kneaded a rectangular piece of dough of length 84cm and width 56cm shown below to cut out circular pancakes.



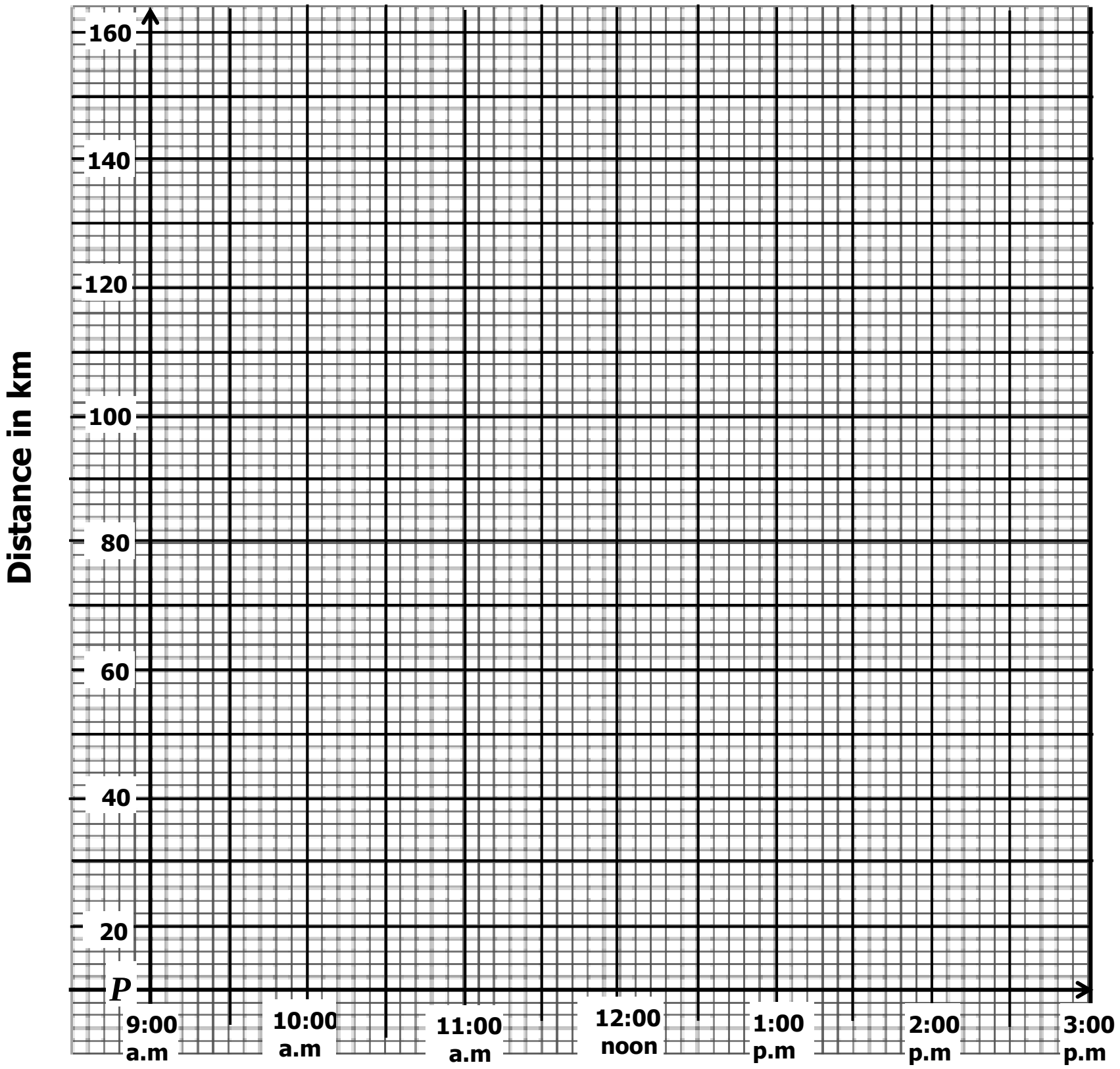
(a) If she cut 6 pancakes along the length and 4 pancakes of the same size along the width. Find the circumference of one of the circular pancake she cut out. (02 Marks)

(Use $\pi = \frac{22}{7}$)

(b) Calculate the area of the unused piece of dough after Shukuran cut out all the pancakes. (03 Marks)

32. Mary left town ***P*** at 9:00a.m. and drove at 30 km/h for 2 hours to town ***Q***. She rested for half an hour at town *Q*. She left town Q and drove for 1½ hours at 40 km/h to town ***R***. She rested for half an hour at town R. She then left town R and drove back to town P at 80Km/h.

(a) Represent Mary's journey on the graph below. (03 Marks)



(b) Calculate her average speed for the whole journey. (02 Marks)

END

SECTION A: 40 MARKS

Answer **all** questions in this Section

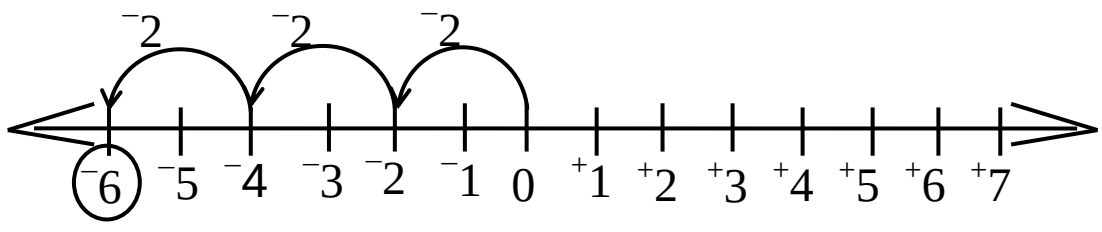
Questions 1 to **20** carry two marks each

1. Add: 278 to 2022.

2. Write MDLXXXV in Hindu Arabic numerals.

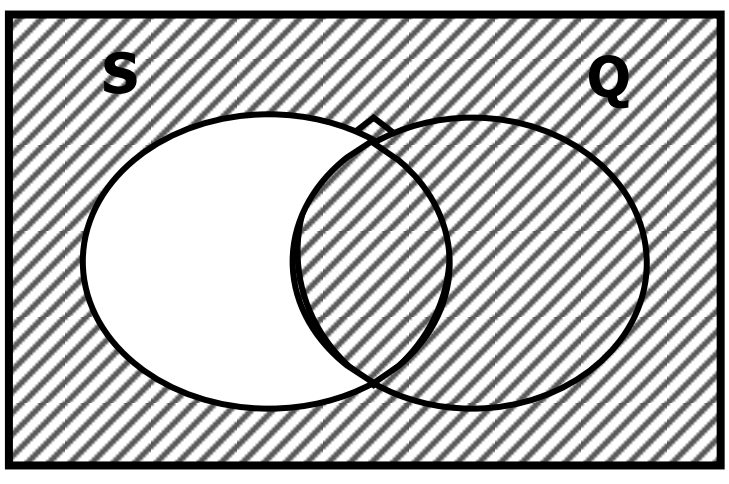
3. Simplify: $1 - \frac{5}{9}$

4. Write the multiplication statement represented on the numberline below.



5. In the number 14205, what is the difference between the values of digits 4 and 2?

6. Describe the shaded region in the Venn diagram below

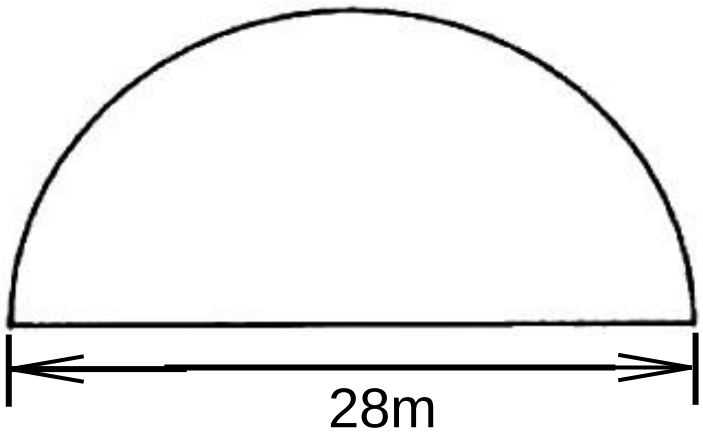


7. What is the square root of the number obtained when 196 is multiplied by 4?

8. What is the mean of 7kg, 5.6kg and 4.2kg?

9. Safi packed 15 cartons each containing 20 bottles of juice. The amount of juice in each bottle was 500ml. what was the total amount of juice, in litres, packed by Safi?

10. A plot of land is in a shape of a semi-circle of diameter 28 metres as shown below.

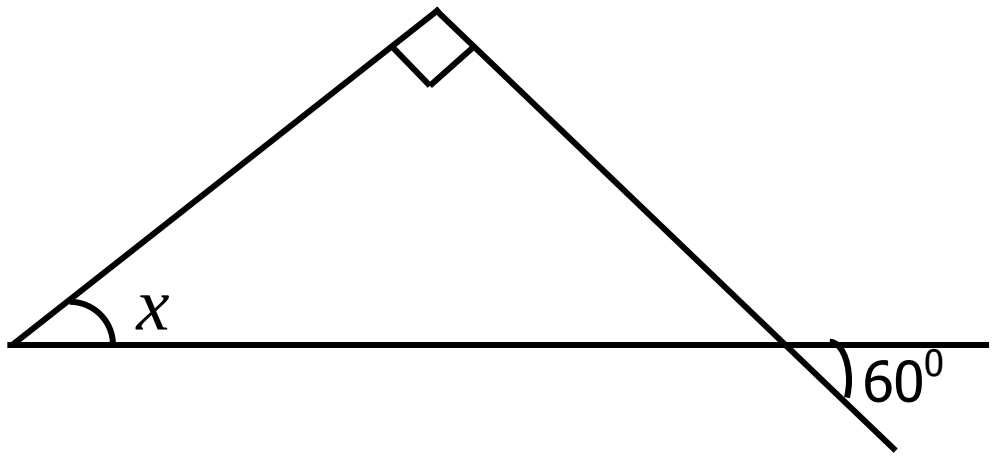


The plot was fenced with erecting posts 4 metres apart. How many posts were used? (Use $\pi = \frac{22}{7}$)

11. Express 20m/s in km/hr.

12. Given that, a = b = 3 and c = 2. Find the value of 2b(a+c) + ac.

13. In the figure below, calculate the value of x



Turn Over

14. 2 tailors can make 8 shirts in 4 days. How many more days are needed by the two tailors to make 128 shirts?

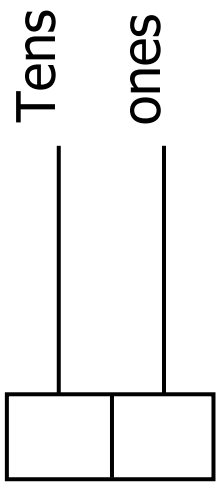
15. Find the next number in the sequence below;

9, 18, 27, 36, 45, ...

16. A trader borrowed sh.150,000 from a micro finance group that offers an interest rate of 5% per month for 4 months. How much did he pay back at the end of the period?

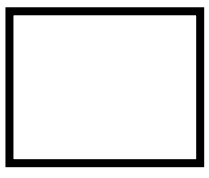
17. Today is Monday, what day of the week will it be after 11 days

18. Show 120_{three} on the abacus below.



19. A baby woke up at 5:30a.m.after sleeping for 7 hours and 45 minutes. At what time did the baby sleep?

20. The length of a wire is 2cm. If it is increased in the ratio of 4:3. What is the new length of the wire?



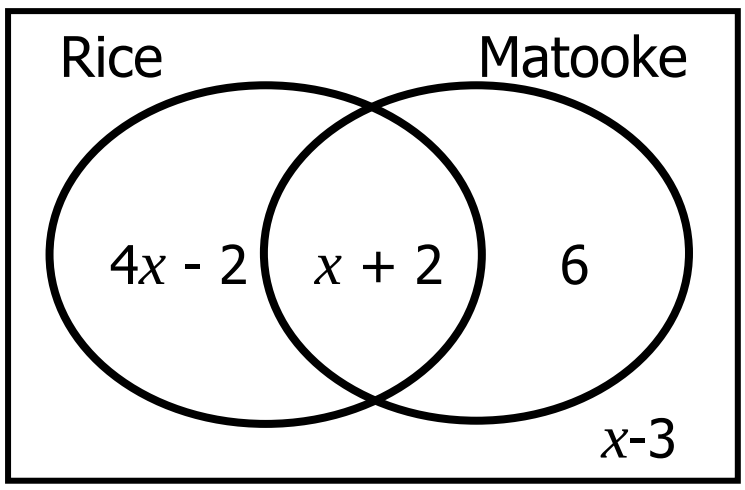
Turn Over

SECTION B: 60 MARKS

Answer **all** questions in this section

Marks for each question are indicated in brackets

21. The Venn diagram below shows the number of pupils who ate different meals at a certain party.



(a) If 35 pupils dislike Matooke, find the value of x. (02 Marks)

(b) Find the probability that a pupil picked at random likes only one type of meal. (02 Marks)

22. Juma sat for week 4 tests and scored as follows,

English 9 out of 10.
Science 64 out of 80.
Mathematics 35 out of 50.
SST 25 out of 30.

(a) Change all the marks for each subject to a percentage. (04 Marks)

(b) Work out the range of the percentage shared. (01 Mark)

23. Ben is11years older than Kyagulanyi. In 4 years' time, Ben will be twice as old as Kyagulanyi.

(a). How old is Kyagulanyi? (03 Marks)

(b). Find the difference in their age in 4 years' time. (02 Marks)

24. A businessman has 200bags of maize flour each weighing 50,000gramms.

(a) Find the total weight of the bags in Kilograms. (02 Marks)

(b) If a pick-up carries 2 tonnes per trip, workout the number of bags the pick-up will carry in one trip. (03 Marks)

(c) Find the number of trips the pick-up will make to transport the whole flour from the milling machine to his shop. (01 Mark)

25. (a) Write 402_{five} in words (01 Mark)

(b) Find the product of 101_{two} and 11_{two} (02 Marks)

26. After spending $\frac{1}{5}$ of her allowances on fees, Julian remained with sh.60,000.

(a) How much does Julian earn as allowances altogether? (03 Marks)

(b) What is $\frac{1}{2}$ of her allowances? (01 Mark)

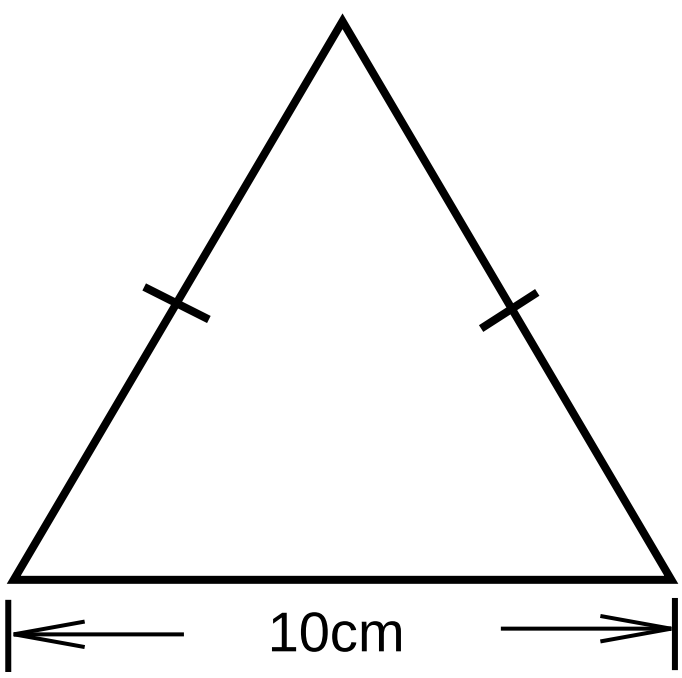
27. (a) Express 0.0259 in standard form. (02 Marks)

(b) What number has been expanded to give, (02 Marks)

$(9 \times 10^{2}) + (8 \times 10^{0}) + (2 \times 10^{-1}) + (3 \times 10^{-2})$?

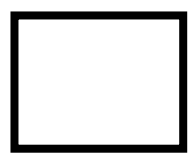
(c) Round off 26.95 to the nearest whole number. (02 Marks)

28. The perimeter of an isosceles triangle below is 36cm. If its height is half the 13^{th} even number.



(a) Find the value of each of its missing sides (04 Marks)

(b) Calculate its area. (02 Marks)



29. Using a ruler and a pair of compasses only,

(a) Construct triangle ABC where AB = 7cm, angle BAC = 90^0 and angle CBA = 45^0. (04 Marks)

(b) Measure the length CB. _____ cm (01 mark)

30. In a football league, a win (W) earns 3 points, a draw (D) only 1 point and a loss (L) 0 point, All teams played equal games (P). The results for four football clubs in the Champions League are given in the table below.

Team	**P**	**W**	**D**	**L**	**Pts**
Man. City	6	.....	0	2	12
PSG	6	3	.....	1	.....
Arsenal	6	2	1	3	.....
Man.United	6	.....	.....	4	4

If a total of 34 points was accumulated by all the four teams at the end of the League, complete the table above. (06 Marks)

31. Jane bought the following items from the market.

3kg of sugar at sh.3500@kg

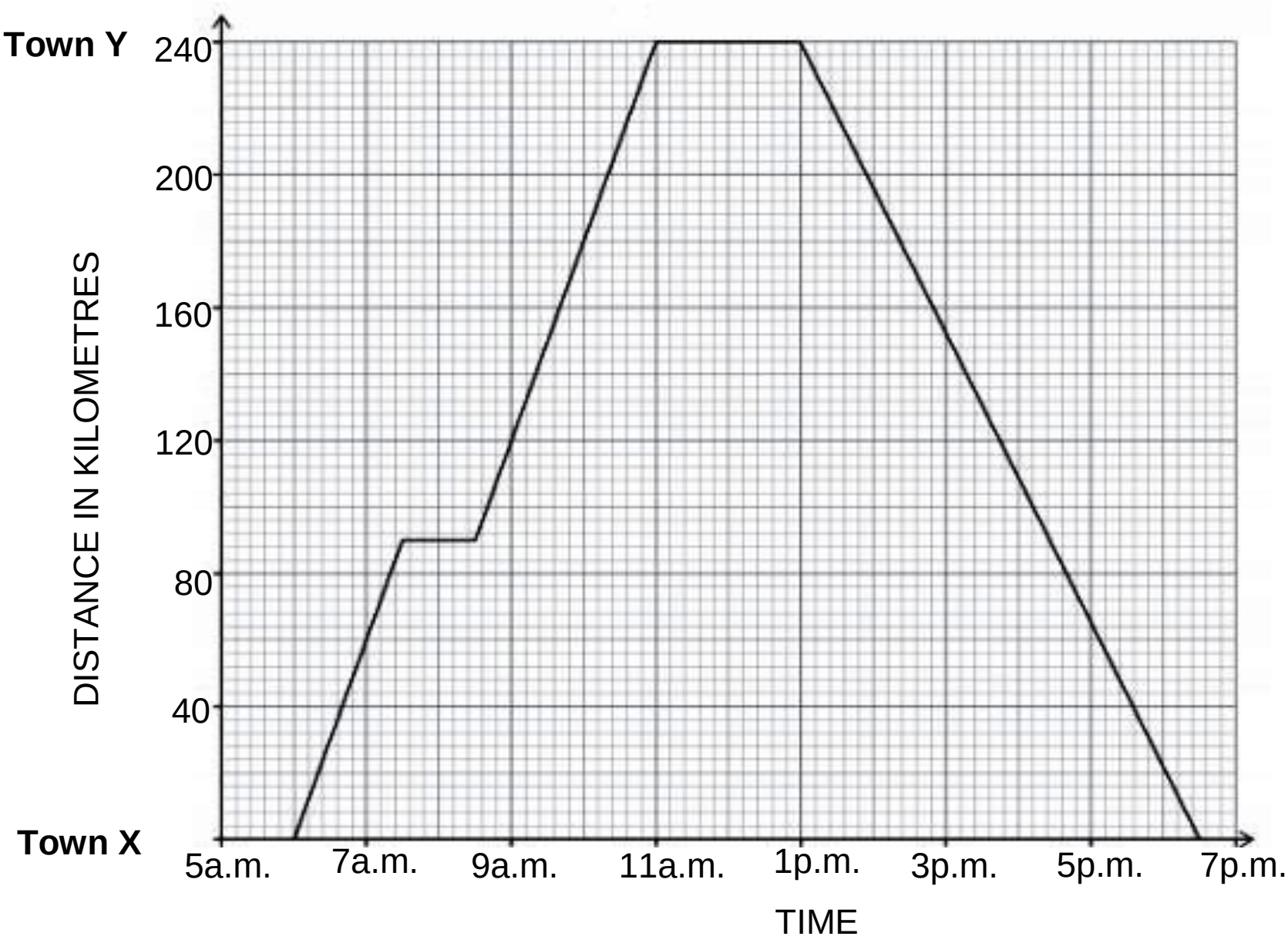
1½kg of rice at sh. 3800 per kg

1½ litres of paraffin at sh.2400 per litre.

8 oranges at sh.250 per orange.

If Jane remained with sh.3,200, find the total amount of money she had at first. (05 Marks)

32. The graph below shows a journey by a bus from Town X to Town Y and back.



What was the average speed of the bus for the whole journey?

(05 Marks)

END

SECTION A: 40 MARKS

Answer **all** questions in this Section

Questions 1 to **20** carry two marks each

1. Divide 4949 by 7.

2. Write 808081 in words.

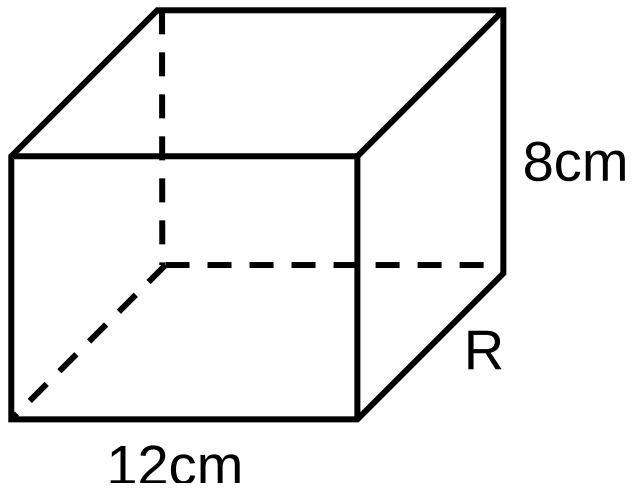
.....

.....

3. Express 0.0002km in metres.

4. Evaluate (x-y) given that $x = {}^{-}1$ and $y = {}^{-}6$.

5. The volume of the box below is 480cm³. Find the value of R.



6. Find the Highest Common Factor (HCF) of 16 and 20.

7. A bus moving at a speed of 80km/hr leaves Jinja at 8:00a.m for Busia and arrives there at 11:00a.m. How far is Busia from Jinja?

8. If nine plates cost sh.2700. What is the cost of seven plates?

9. Find the sum of 3a + 7 and 4a – 7.

10. Arrange $\frac{3}{4}, \frac{11}{12}, \frac{5}{6}, \frac{1}{2}$ and $\frac{7}{8}$ in ascending order.

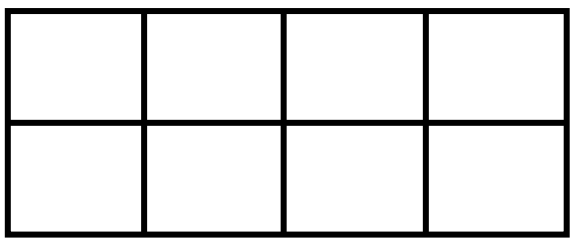
11. The pupils are aged (2x+5), (3x-10) and (x+3) years. Their total age is 34 years. How old is the youngest pupil?

12. A 2½hour test ended at 11:45a.m. At what time did it start?

13. What percentage of 10kg is 400gramms?

14. Use distributive property to workout (4.5×145) – (45×4.5).

15. Shade $\frac{3}{4}$ of the figure below.



16. What are the next two numbers in the series below?

48, 43, 36, 27, ……. , …….

17. Kato wrote a three digit number using digits 1, 3 and 6.
If Kato wrote all the possible 3 digit numbers greater than 300,
What is the probability of him writing an even number?

18. A taxi with 14 passengers and the driver all weigh 1700kg. If the weight of each person is 70kg. What is the weight of the vehicle?

19. The table below shows marks scored by different candidates in a marked out of 10.

No. of pupils	1	2	1	1
Marks out of 10	9	7	x	4

Find the value of x if the average score was 6.

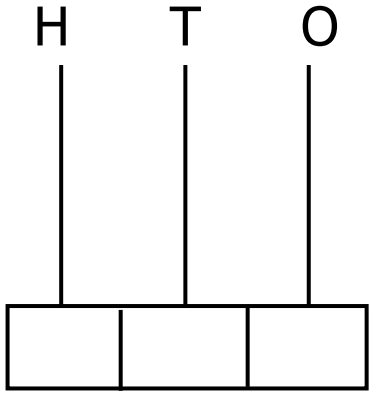
20. Find the simple interest on sh.60,000 for 5 years at a rate of 3⅓%.

SECTION B: 60 MARKS

Answer **all** questions in this section

Marks for each question are indicated in brackets

21. (a) Draw beads to show the number 403 on the abacus below. (02 Marks)



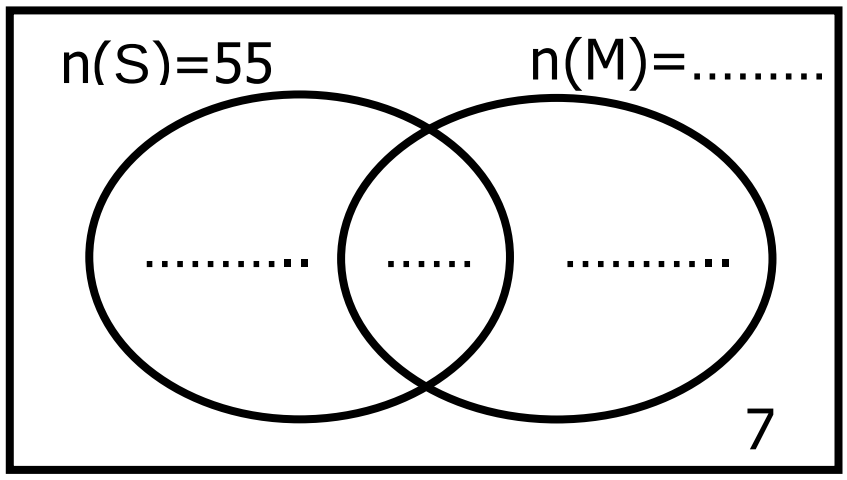
(b) Expand the number shown on the abacus using powers of ten. (01 Mark)

(c) What is the value of the number in the third position on the above abacus. (01 Mark)

22. At a party, 72 guests were invited, 55 were served with soda(S), y were served with mineral water (M), while 7 didn't take any of the two drinks and 17 were served with both drinks.

(a) Represent the above information on the Venn diagram below.

$n(\mathcal{E}) = 75$ (02 marks)



(b) Find the value of y. (02 marks)

(c) How many guests were served with one drink? (01 Mark)

23. James went shopping and bought the following items from the market.

A bottle of sanitizer at sh.4,000
2kg of sugar at sh.3500 per kg
5 litres of Fotune Butto cooking oil.

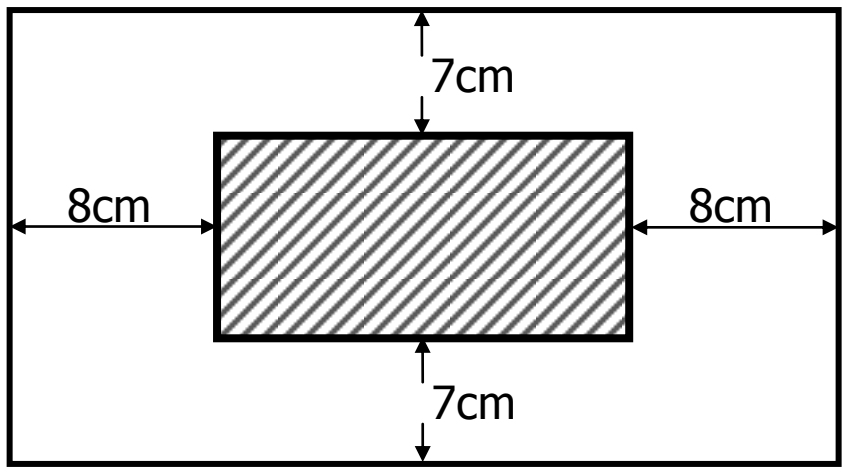
If he paid sh.38,500 for all the items, how much money did he buy each litre of Fortune Butto cooking oil? (04 Marks)

24. Seats in a theatre are arranged in rows for a concert. The theatre has 20 rows with 22 chairs each. On a Christmas day, children occupied 7 rows and elders occupied the rest.

(a) How many people attended the concert? (02Marks)

(b) If each child paid sh.3,000 and each elder paid sh.5,000, how much was collected from the concert that day? (04 Marks)

25. A piece of cloth is laid on the table 90cm long and 70cm wide as shown in the figure below. The area covered by the piece of cloth is shaded.



(a) Find the length and width of the piece of cloth. (02 Marks)

(b) Find the area of the table which is not covered by the piece of cloth. (04 Marks)

26. In Nyendo market, the cost of the cow is 7 times the cost of the goat. Shamran bought a cow and a goat at sh.232,000. Find the cost of each of the two animals. (04 Marks)

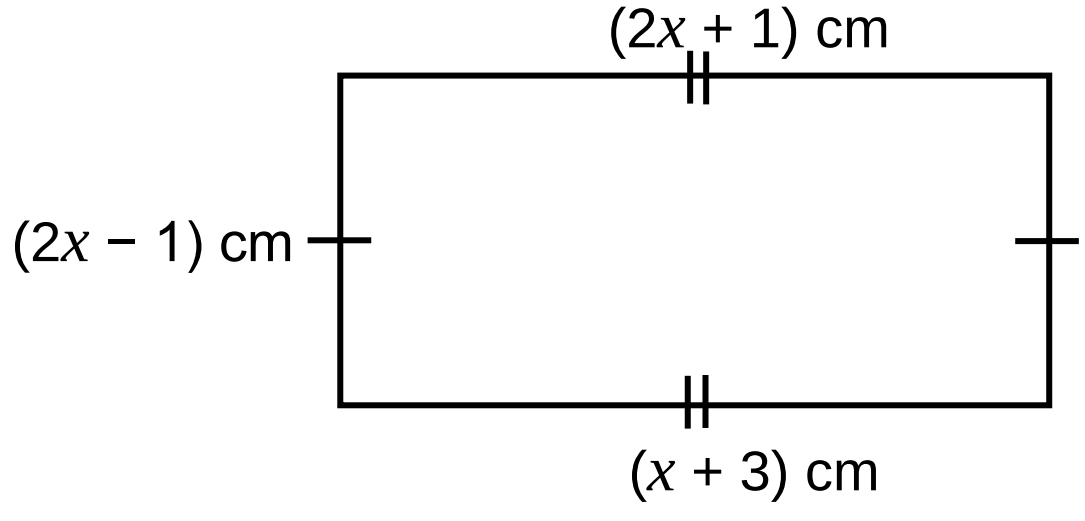
27. In a primary school, each pupil plays only one game, the pupils who each game are given as follows.

Football	-55
Volleyball	-45
Netball	-40
Basketball	-40
Tennis	-20.

(a) What percentage of pupils play Netball? (02 Marks)

(b) If a pupil is picked at random, What is the probability that the pupil plays volleyball? (02 Marks)

28. The figure below is a rectangle. Use it to answer the questions about it.



(a) Find the perimeter of figure. (04 Marks)

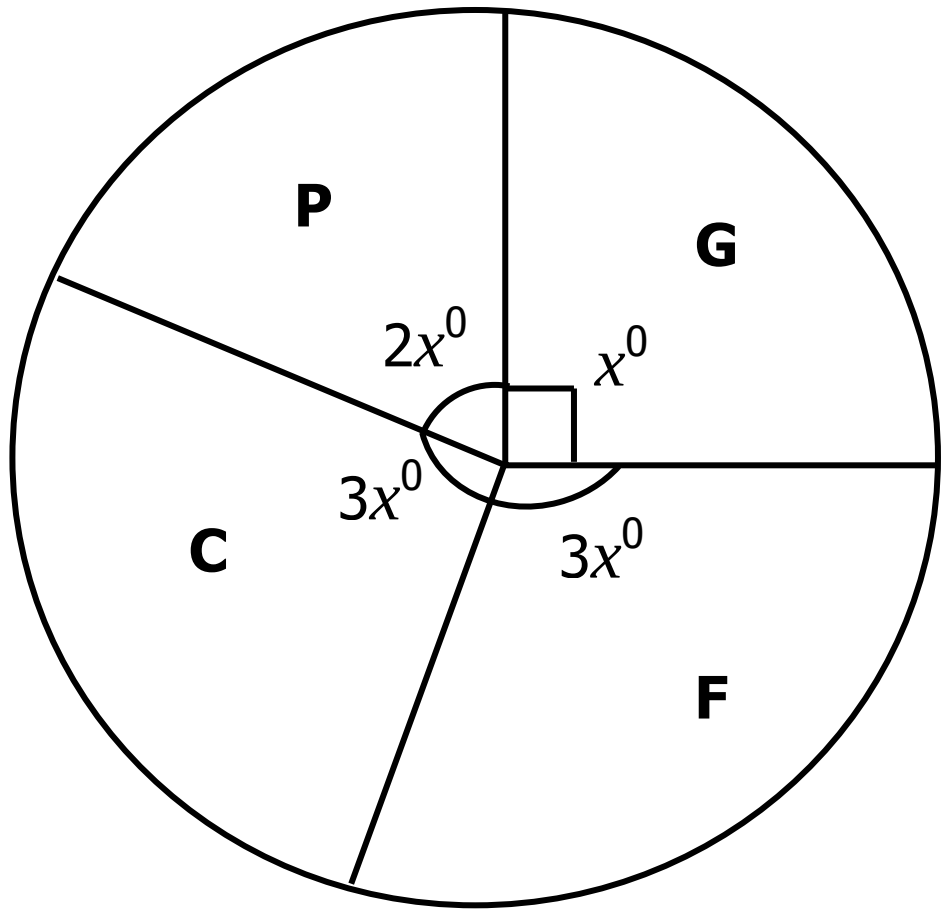
(b) Find the area of the rectangle. (02 Marks)

29. (a) The mean of $\frac{1}{2}$, x and $\frac{3}{4}$ is $\frac{5}{9}$. Find x. (03 marks)

(b) Find the range of 10, 8, 15, 3, -5, 6 and -1. (01 Mark)

(c) What is the median of 13, 15, 17 and 19? (01 Mark)

30. The Pie-Chart below shows how a farmer has divided his land. C is for cash crops, G is for grazing, F is for food crops and P for other purpose. The land available is 720 hectares.



(a) How many hectares are left for grazing. (03 Marks)

(b) If he pays sh.200,000 per hectare per year, How much will he pay for the land reserved for cash crops. (02 marks)

31. (a) Using a pair of compasses, ruler and pencil only, construct triangle **EFG** where $\overline{\mathbf{EF}}$ = 8cm, angle **GEF** = 60^0, angle **EFG** = 45^0. From **G** drop a perpendicular bisector **FG** to meet **EF** at **H**. (04 Marks)

(b) Measure $\overline{\boldsymbol{GH}}$ .....cm (01 Mark)

(c) Using $\boldsymbol{GH}$ as the height, find the area of triangle EFG. (02 Marks)

32. At Twalibah Islamic P/S, two bells are rung at different intervals of 30 minutes and 40 minutes. If they are rung together at 10:00a.m, At what time will they be rung together again?

(04 Marks)

END

SECTION A: 40 Marks

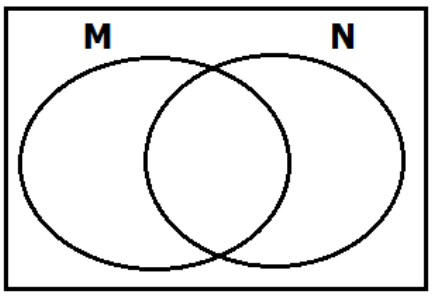
Answer all questions in this section.

Questions **1** to **20** carry two marks each**.**

1. Work out: $\mathbf{36 \div 9}$

2. Write $\mathbf{1456}$ in words.

3. Shade (**M**∪**N**) complement in the diagram below.



4. Simplify: $\mathbf{6 + \bar{8}}$

5. Simplify: $\frac{\mathbf{1}}{\mathbf{2}} - \frac{\mathbf{2}}{\mathbf{3}} + \frac{\mathbf{2}}{\mathbf{4}}$

6. Express $\mathbf{5}\frac{\mathbf{1}}{\mathbf{2}}$ kg to grammes

7. Given that  represents **8** balls. How many balls are represented by the pictures below?

8. Collect like terms and simplify the equation; $\mathbf{7}\boldsymbol{m} - \mathbf{4}\boldsymbol{n} - \mathbf{3}\boldsymbol{m} - \mathbf{3}\boldsymbol{n}$

9. A motorist covered $\mathbf{240}\boldsymbol{km}$ in $\mathbf{3}\ \boldsymbol{hours}$. Calculate his average speed.

10. With the help of a pair of compasses, a ruler and a sharp pencil only, construct an angle of $\mathbf{135^0}$.

11. Increase **1200**kgs by **20**%.

12. A farmer borrowed **sh.240,000** from a village **SACCO** at an interest rate of $\mathbf{12\frac{1}{2}}$ per year for **4** months. Find how much interest the farmer paid back after the 4 months.

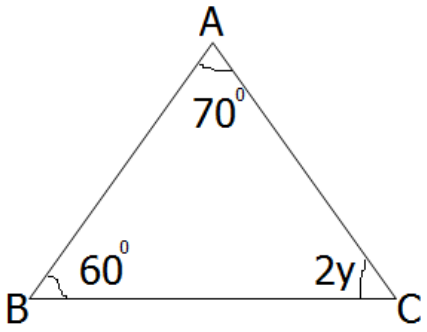
13. Find the sum of the next two numbers

    $\mathbf{2, 3, 5, 7, \_\_\_, \_\_\_\_}$

14. An examination started at **8:30am** and lasted for **1** hour and **20** minutes at what time did it end?

15. Express **4865** in standard form.

16. Use the triangle below to answer the questions that follow, find the value of **y**.



17. If set **K** has **31** proper subsets, how many elements are in set **K**?

18. Solve for $\boldsymbol{P}$: $\frac{3}{5}\boldsymbol{P} + \boldsymbol{4} = \boldsymbol{2} + \boldsymbol{p}$

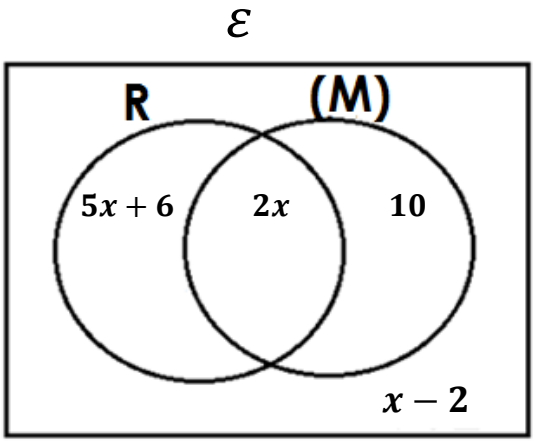
19. Write **XLV** in words.

20. The **LCM** of two numbers is **180** and their **GCF** is **6**, find the second number if the first number is **30.**

Section B: 60 Marks

Answer all questions in this section.
Marks for each question are indicated in the brackets.

21. The venn diagram below shows the number of pupils who like matooke **(M)** and those who like rice **(R).** Study it carefully and answer the questions about it.



(a) If **20** pupils like rice, find the value of x. (2 marks)

(b) Find the probability of picking a pupil who does not like rice. (3 marks)

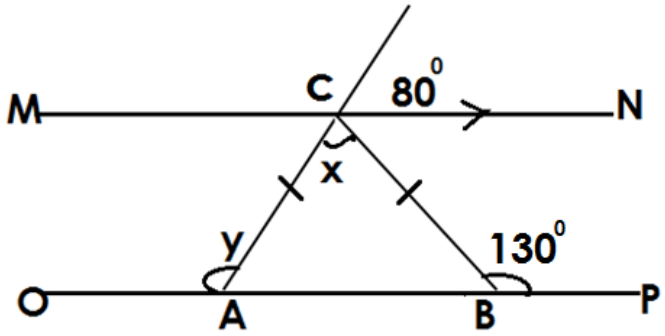
22. The head teacher distributed some text books among three classes where each child got a text book in **P.6, P.5** and **P.4** in the ratio of **3:7:5** respectively. If P.5 got **42** text books.

(a) How many children are in the three classes? (4 marks)

(b) How many more children are in P.4 than P.6? (2 marks)

23. (a) Given that the interior angle of a regular polygon is four times its exterior angle, Name the polygon.

(b) In the diagram below, **MN** is parallel, to **OP**. **ABC** is a triangle, angle **TCN** = $\mathbf{50^0}$ and angle **CBP** = $\mathbf{130^0}$. Study it carefully and answer the questions that follow.



Find the size of;

(a) angle **y**

(b) angle **x**

24. Given the numeral: $\mathbf{46392}$.

(a) Expand the above numeral using exponents. (2 marks)

(b) Find the quotient of the value of 6 and the place value of 9 in the given numeral. (2 marks)

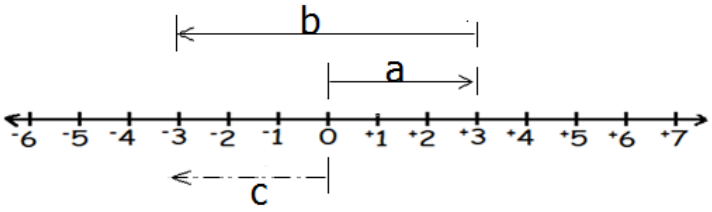
25. Mr. Muwonge drove from home at a speed of 60km/hr to school for **2 hours** to visit his daughter Tisha, he took **30 minutes** talking to the daughter and then continued to his place of work which is **50km** from school for $\mathbf{1\frac{1}{2}}$ hours.

(a) How far is the school from his home? (2 marks)

(b) Find his average speed for the whole journey. (3 marks)

26. At Mrs. Kagoro's supermarket, a basin costs twice the cost of a ruler and a pen costs **sh. 2000** less the cost of a basin. If Mr. Kibirige bought the three items at **sh. 3000**, find the cost of each item. (4 marks)

27. Study the ***number line*** and use it to answer the questions that follow.



(a) Identify the integers represented by; (1 mark each)

(i) a = _____ (ii) b = _____ (iii) c = _____

(b) Write the Mathematical sentence shown on the above number line. (1 mark)

28. (a) Using a ruler, pencil and a pair of compasses only, construct a parallelogon $PQRS$ where $PQ = 6cm, QR = 5cm$ and angle $SPQ = 60^0$ (4 marks)

(b) Drop a perpendicular line from S to cut PQ at x. (2 marks)

29. Mr. Olupot went shopping and bought the items below.

Item	**Quantity**	**Unit cost**	**Total cost**
Bread	3 loaves	Sh. 4400	Shs. _____
Soap	____ bars	Sh. 3500	Sh. 7000
Wheat flour	2kg	Sh. _____	Sh. 5000
Total			Sh. _____

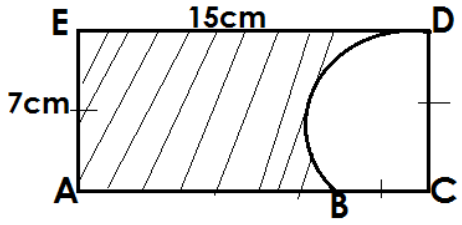
(a) Complete the table above. (4 marks)

(b) If he was given a **10 %** discount, how much was the discount? (2 marks)

30. (a) Express $\mathbf{13_{ten}}$ to binary base. (2 marks)

(b) Change $\mathbf{134_{five}}$ to base three (3 marks)

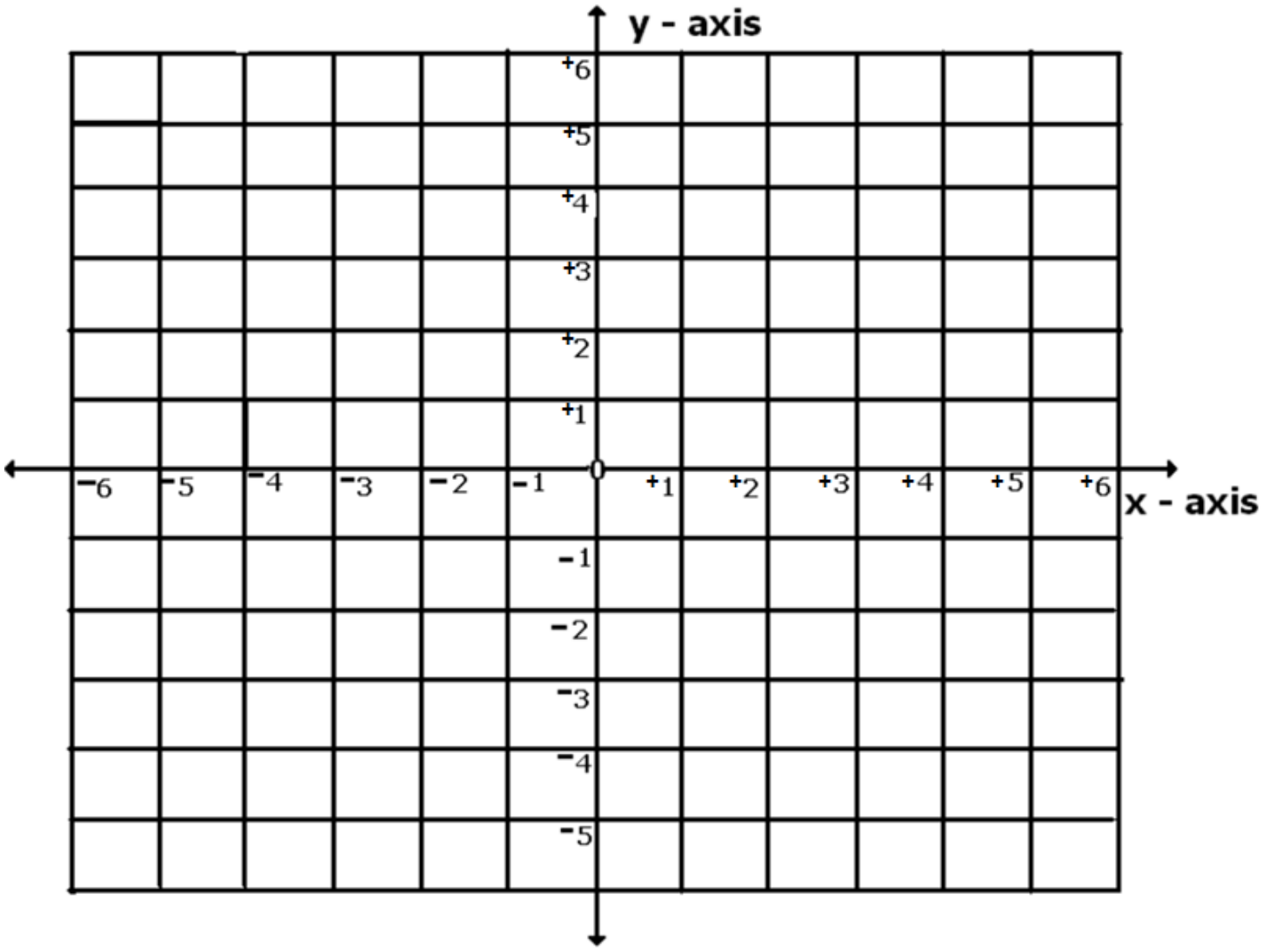
31. Study the figure below and answer the questions about it.



(a) Find the area of the shaded part **ABDE**. (Take $\pi = \frac{22}{7}$) (2 marks)

(b) Work out the perimeter of **ABDEA**. (Take $\pi = \frac{22}{7}$) (2 marks)

32. (a) On the graph below, plot the points. **A(**0, $^{+}$3**), B**($^{-}$4, $^{-}$3**) C**($^{+}$4, $^{-}$3**)** (3 marks)



(b) Join point **A** to **B** to **C** to **A**. (1 mark)

(c) Find the area of the figure formed. (1 mark)