

Mathematics

Revision Practice Booklet

Vol 2



Index No:

Name:

School:

Year:

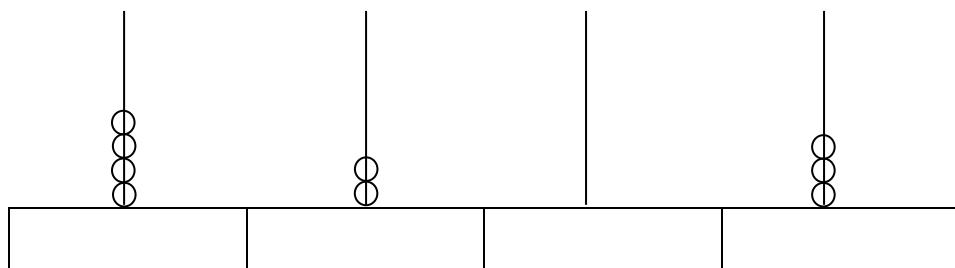
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SECTION A: 40 MARKS

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

1. Work out: $103 + 7$
 2. Write in figures: Nineteen thousand, nineteen.
 3. Given that $A = \{2, 3, 5, 7, 11\}$ and $E = \{1, 3, 6, 10, 15\}$. Find K .
 4. Write the number shown on the abacus below

Hundreds Tens Ones Tenths



5. Show 3:37p.m on the clock below:



6. Simplify $6k - 7k - k$

7. A lorry uses 6litres of petro to cover 30km. how many litres of Petro will be needed to travel 100km?

8. A pick-up carries 8.5 tonnes of maize flour to the market. Find the maximum number of bags weighing 50kg each pick-up can carry.

9. With the help of a ruler, a pencil and a pair of compasses only, construct an angle of 37° – in the space provided below.

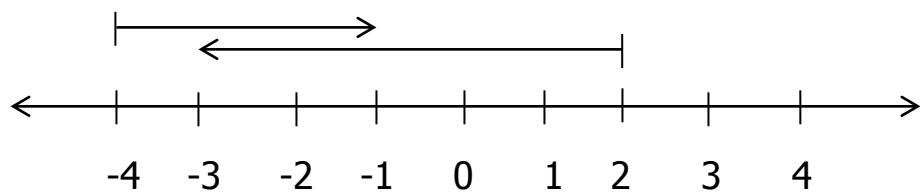
10. Find the product of the next two numbers in the sequence:

-27, -17, -13, -9, ___, ___

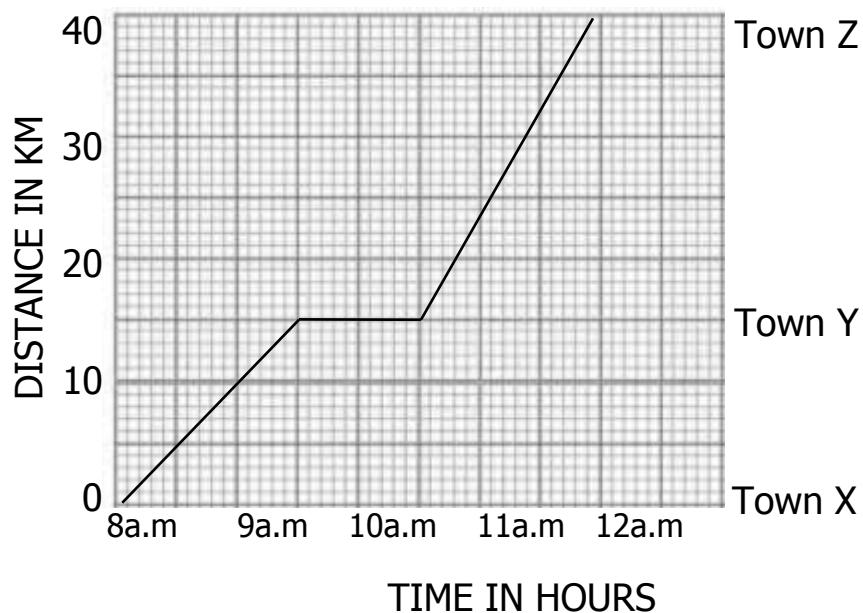
11. Work out: $(0.01 \times 800) - (700 \times 0.01)$

12. Round off 3.675 to the nearest tenths

13. Workout the difference of the integers shown on the number line below:



14. The travel graph below shows how Mata travelled from town X through town Y town Z. Study it and use it to answer the question that follows;



Calculate Mata's average speed for the whole journey.

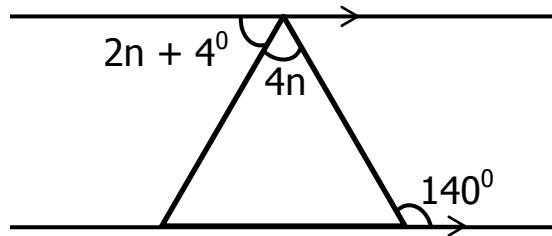
15. The average weight of 5 pupils is 45kg. When the sixth pupil joins the group, the average becomes 50kg. Work out the weight of the sixth pupil.

16. Decrease 40 sheep by $2\frac{1}{2}\%$.

17. Solve the inequality: $3(1 - x) < 6$

18. A man had some mangoes, when he grouped them in heaps of 6, 5 mangoes were left and when he grouped them in heaps of 7, 6 mangoes remained. How many mangoes did he have?

19. Find the size of n in degrees in the diagram below.



20. A customer paid us dollar 45 for a pair of shoes after being a discount Sh 57,750, what was the original price of shoes in Uganda shillings if 1 US dollar costs UG Sh 3, 850?

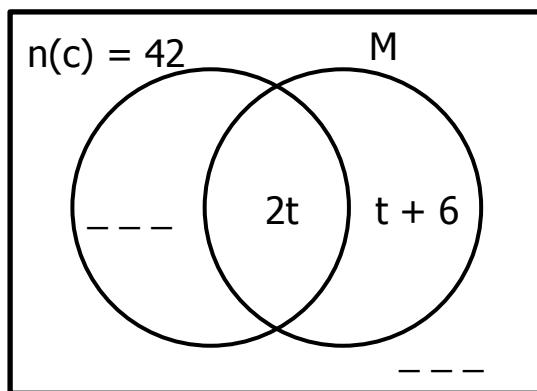
SECTION B: 60 MARKS

Answer all questions in this section

Marks for **each** question are indicated in brackets

21. In a village, 42 farmers grow Coffee (C), $t + 6$ farmers grow Maize (M) only, $2t$ farmers grow both crops while 1 farmer grows neither of the crops.

- (a) Use the information given above to complete the Venn diagram below (02 marks)



- (b) If 27 farmers grow maize altogether, find the total number of farmers in the village. (03 marks)

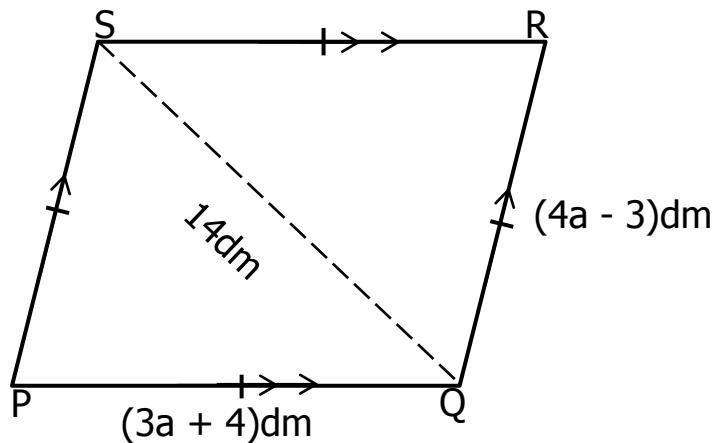
22. (a) Express 0.3636--- as a common fraction in its simplest form.
(02 marks)

(b) Simplify: $\frac{4}{5} + \frac{1}{3} \times \frac{3}{5} - \frac{1}{4}$ of $\frac{2}{5}$ (03 marks)

23. (a) Convert 45 to base three. (02 marks)

(c) Given that $47_n = 133_{\text{five}}$. Find the value of n. (02 marks)

24. The diagram below shows a quadrilateral PQRS. Study it and use it to answer the questions that follow.



(a) Work out the perimeter of the Quadrilateral PQRS. (02 marks)

(b) Calculate the area of the Quadrilateral PQRS. (03 marks)



25. To bake 100 chapattis for sale, Mwesigwa has to buy the following items.

- (i) – litres of cooking oil at Sh 6,000 per litre
- (ii) packets of wheat flour at Sh 5,500 per packet
- (iii) tins of charcoal at Sh 5,000 per tin
- (iv) Spices for Sh 3,000.

If Mwesigwa sold all the chapattis at Sh. 700 each, calculate his percentage profit. (05 marks)

26. (a) Using a ruler, a pair of compasses and a pencil only construct a triangle RST such that RS = 7cm, angle SRT = 120° and RST = 30° . Construct a perpendicular line from T to meet RS at point M

(04 marks)

(b) Measure the length of MTcm

(01 mark)

27. The table below shows marks scored by P.7 pupils in mathematics test. Study and answer questions that follows:

Marks	60	80	70	d
Tallies	///	/	/	///

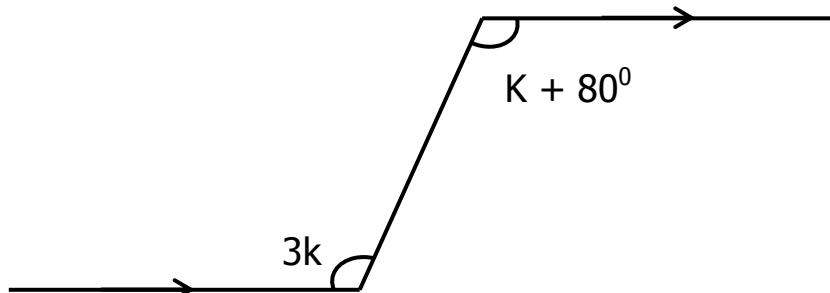
Find the value of d if the average mark was 74 marks. (04 marks)

28. (a) The interior angle of a regular polygon is 20% more than the exterior angle. Calculate the number of sides of the polygon.

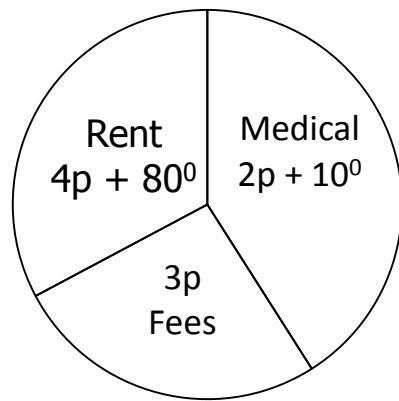
(03 marks)

(b) Find the size of angle K in the diagram.

(02 marks)



29. The pie-chart below shows how a family spends its income. Study it carefully and answer the questions that follow.



- (a) If the family spends Sh 110,000 more on rent than, fees, find the total income of the family. (04 marks)

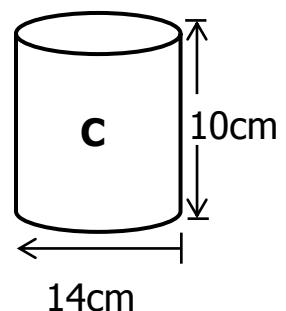
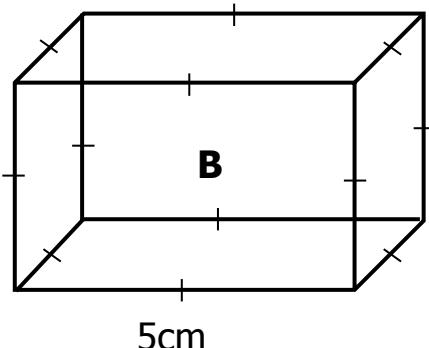
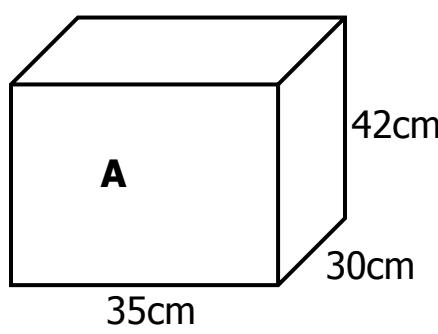
(b) How much does the family spend on medical and fees altogether.
(02 marks)

30. (a) Solve: $\frac{1}{2}p + 7 = \frac{1}{3}p + 9$ (02 marks)

(b) A farmer had 40 sheep on a farm. The number of goats is four times the number of cows on the farm. If there are 48 more goats than cows, find the total number of animals on the farm.
(03 marks)



31. Study the diagrams below and use them to answer the following questions.



(a) How many layers of tin **C** can be filled in Prism **A**? (01 mark)

(b) Find the number of cubes that can be packed in prism **A** (02 marks)

(c) Calculate the volume of the space that can be left after packing cupfuls of tin **(c)** in Prism **A**. Take $(\pi = \frac{22}{7})$ (03 marks)

32. Three men Opio, Odong and Opeta shared land in the ratio of 8:5:7 respectively. Opio then sold $\frac{1}{4}$ of his land to Opeta. If opeta has 12 acres more than Opio, find how much land the three men shared.

(05 marks)



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 - of the sugarcane and Mary ate - 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
 \underline{ }

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

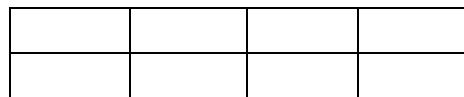
12. A parent had a certain number of apples. He shared them among 6 boys but 1 apple remained. When he shared the same number of apples among 4 girls, still 1 apple remained.
Find the least number of apples the parent shared.

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?

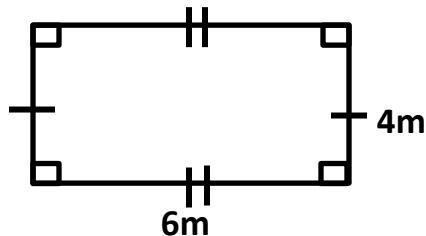
15. The age of Ben is thrice that of Ali. If Ali is 12 years old.
How old is Ben?

16. In the diagram below , un shade -



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- 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

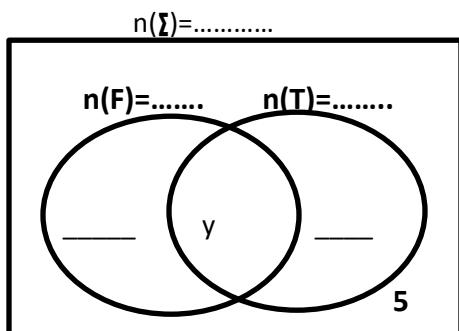
Answer **all** the questions in this section

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)**

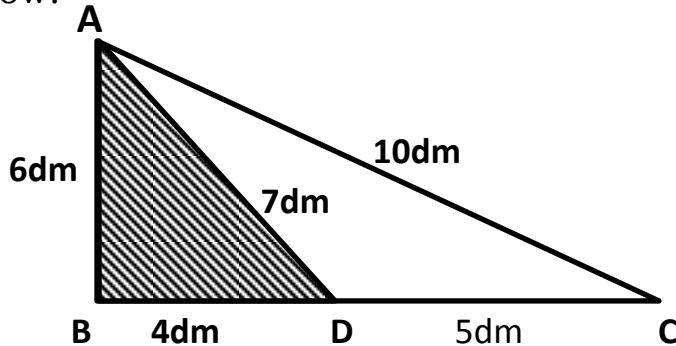
24. In a mathematics test, pupils obtained marks as shown below:

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)

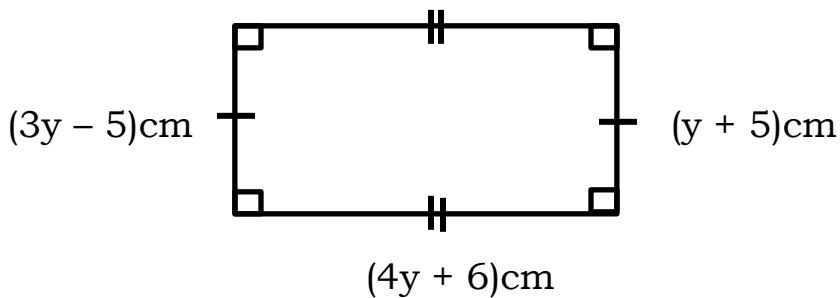
b) Calculate the area of the figure ABC.

(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, $\frac{1}{3}$ of the pupils are boys and the rest are girls.

a) What fraction is for girls?

(1mark)

b) If there are 18 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
Meatkg	Sh. 10,000	Sh.5,000
Soap	3 bars of soap	Sh. 7,000	Sh.....
Total expenditure			Sh.

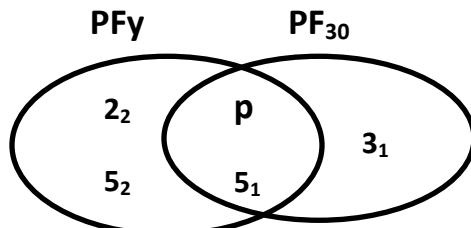
a) Complete the above table. (please show your working). **(4marks)**

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 ;

(1 mark each)

i) p

ii) y

b) Find the LCM of the PF_y and the PF_{30}

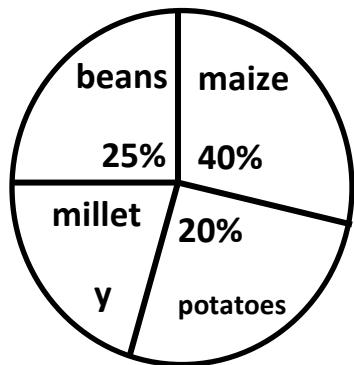
(2marks)

30. a) Work out; _____

(3marks)

b) Reduce — 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)**

SECTION A: 40 MARKS

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

Question 1 to 20 carry two marks each

1. Work out: 459 plus 43
 2. Express CXCIV as Hindu- Arabic numerals.
 3. If $K = \{ \text{prime numbers less than } 12 \}$.
Calculate the number of subsets in K .
 4. The ratio of boys to girls is 3:2. If the class has 27 boys.
How many pupils are in the class?
 5. Find the range of the next two numbers in the sequence;
1, 4, 9, 16, __, __

6. Simplify: $5 + -9$

7. Solve for m: $- + 2 = 6$

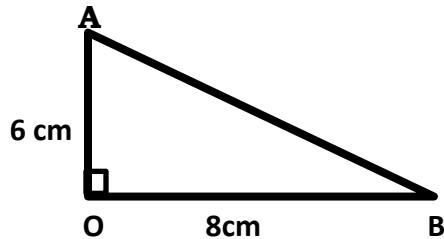
8. Tonny bought 1500g of salt. How many kilogrammes of salt did he buy?

9. A forty minute game ended at 9:20am.

At what time did the game start?

10. Without dividing , show that 12558 is divisible by 7.

11. Find the length of AB of the figure below.



12. Find the smallest number of eggs which can be shared among 6 boys or 8 girls and leaves 2 as a remainder.
13. A trader bought a turkey at sh.40,000 and sold it making a loss of sh.2,000. Calculate his percentage loss.
14. Work out: $9 \div -$
15. Use distributive property only to work out $(60 \div 5) - (40 \div 5)$
16. Jeremiah scored the following marks in E.O.T exams:
MTC=70% , SCI=65%, ENG=80%, SST=70% and RE=90%.
Calculate his modal mark.
17. Convert 21 33 hours into a 12 hour clock system.

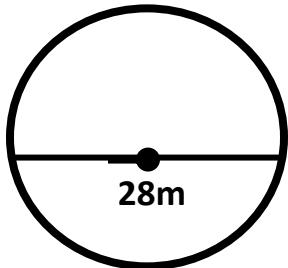


18. Given that represents 7 mangoes.

How many pictures will represent 105 books?

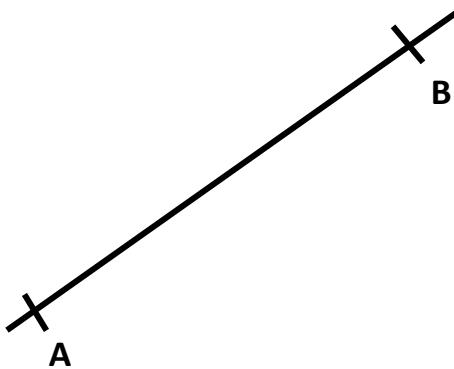
19. Below is a circular garden. Find the total distance round the garden.

(Take π as $-\text{ }$)



20. With the help of a pair of compasses, ruler and a very sharp pencil only, drop a perpendicular bisector from point Z to meet line AB at W.

• Z



SECTION B: 60 MARKS

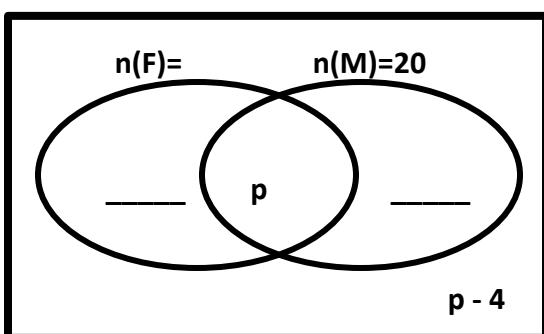
Answer **all** the questions in this section

Marks for each question are indicated in bracket

21. At a birthday party, 20 guests took Mirinda $n(M)$, 11 guests took fanta only, p guests took both mirinda and Fanta while $(p-4)$ guests took other drinks.

- a) Complete the venn diagram below.

(2marks)



- b) If 3 guests took stoney, how many guests attended the party?

(3marks)

22. a) Given that $24_w = 14_{\text{ten}}$. Find the unknown base.

(3marks)

- b) Given the number 375, complete correctly.

(2marks)

____ Tens ____ Ones ____ Hundreds

23. In a P.7 class, 20% of the boys were absent for the Mock Examinations,
– of the remainder of the boys were present.

a) Find the fraction of the girls in the class.

(2marks)

b) If there are 30 girls in the class, calculate the number of pupils in the
(3marks)

24. a) Convert 5 metres per second into kilometre per hour. **(2marks)**

b) A taxi moved a distance of 180km in 180 minutes.

Calculate the speed the taxi was using in kilometre per hour.**(3marks)**

25. The base area of a rectangular water tank is 1000cm^2 .

If the tank has a height of 100cm '

a) Find the capacity of the water tank.

(2marks)

b) If Henry was asked to fill the tank using a - litre cups of water.

How many cups did he use to fill the water tank completely?

(2marks)

26. The table below shows the rates at which a forex bureau buys and sells United States dollars and Kenya Shillings in Uganda shillings.

Use it to answer the questions that follow.

Currency	Buying rate	Selling rate
1 US dollar	Ugsh.3500	Ugsh.3650
1 KSh	Ugsh.30	Ugsh.32

a) Jimmy had Ksh.18,250 and bought an air ticket using US dollars.

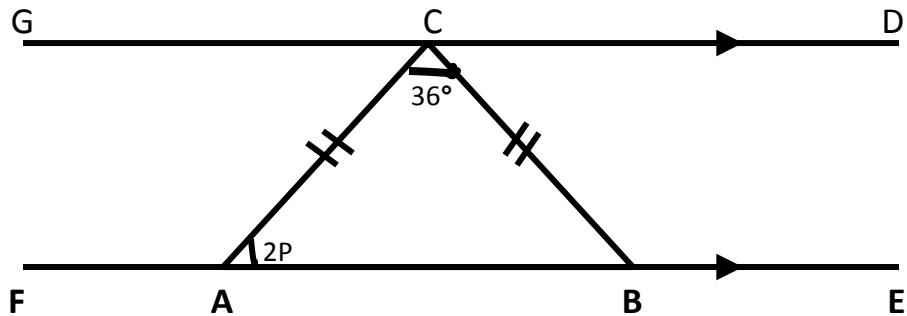
How many US dollars did he pay for the ticket?

(3marks)

b) If Nisha had \$400 and bought a laptop in Kenya shillings.
What was the cost of the laptop in Kenya shillings? **(3marks)**

27. Namubiru deposited sh.100,000 in a bank which offers an interest rate of 10% per year.
After how many months will her account yield an amount of sh.102500?
(4marks)

28. Study the diagram below and use the information given to answer the questions that follow.



a) Find the value of p **(2marks)**

b) Find the size of angle marked; **(2marks each)**

i) CBE

ii) GCA

29. Given the equation of the line K is $y = 3x - 1$

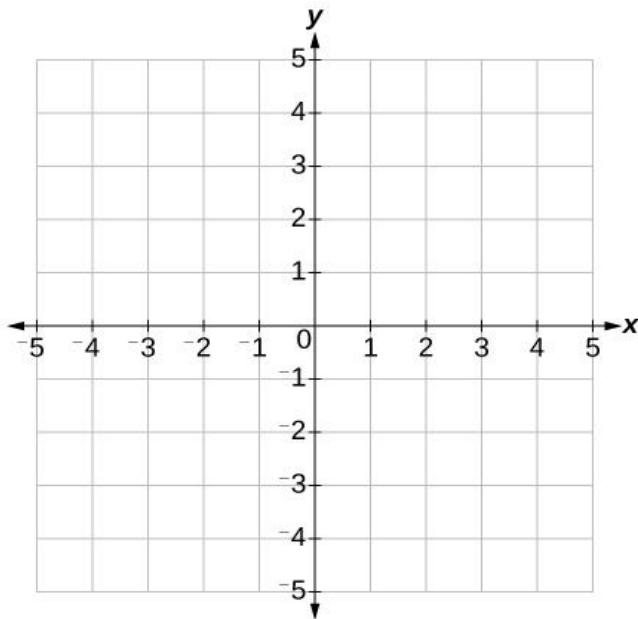
a) Complete the table below.

(2marks)

X	1	___	0	___
y	___	5	___	-4

b) Plot the above coordinates on the grid below to show the line.

(4marks)



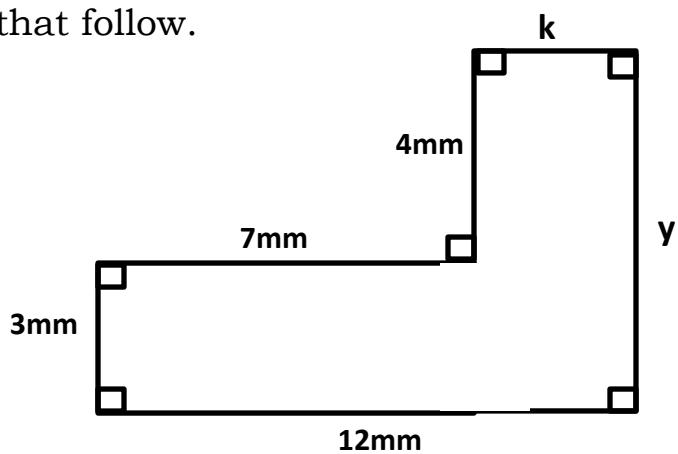
30. a) Simplify: _____

(2marks)

b) Subtract : $p + 2$ from $2p - 5$

(2marks)

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



a) Find the value of y and k .

(2marks)

b) Calculate the area of the entire figure.

(3marks)

32. Using a pair of compasses, ruler and a very sharp pencil only,
a) construct a triangle KLM where line KL=5cm, angle KLM = 105°
and line LM= 3.5cm. **(4marks)**

b) Measure angle LKM **(1mark)**

SECTION A

1. Work out: 825

$$\begin{array}{r} + 174 \\ \hline \end{array}$$

2. Write in figure 45000 in words.

3. Show 7023 on the abacus.

4. Work out: 73×4

5. Write XCIV in Hindu Arabic Numerals.

6. 4 books cost Sh. 2400. Find the cost of 6 similar books.

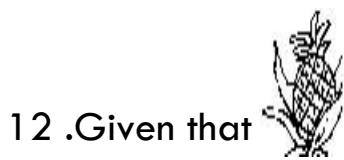
7. Workout $1101_{\text{two}} + 110_{\text{two}}$

8. Simplify $(-2) - (-7)$

9. Find the next number in sequence. $2, 3, 5, 7, \underline{\hspace{2cm}}, \underline{\hspace{2cm}}$

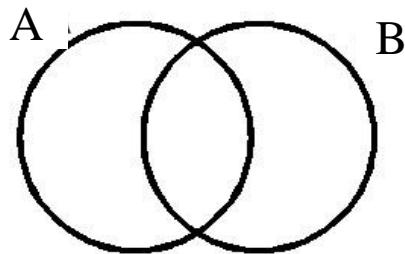
10. Give that $a = \frac{1}{2}$ and $b = 72$. Find the value of ab

11. A baby started sleeping at 2:50pm and woke up at 3:20pm. For how long was she asleep?

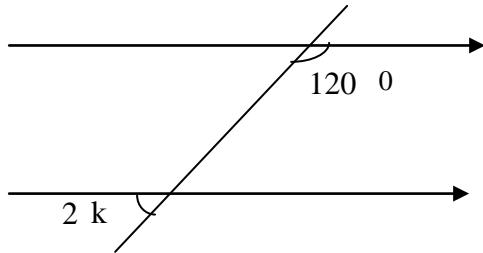


12. Given that  represents 20 pineapples. How many pictures will represent 120 pineapples?

13. In the diagram below, shade $(A \cap B)$ complement



14. Find the value of k in degrees.



15. Using a ruler, a pencil and protractor, draw an angle of 45° .

16. What is the place value of 6 in the number 56748?

17. Calculate the circumference of a circular garden whose diameter is 28cm

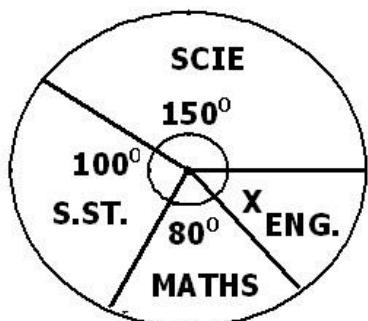
18. Simplify: $4x - 3y + 2x + 3y$

19. Work out $6 \div 2(1+2)$

20. Komodo paid back the amount worth sh. 14400 to the bank after using it for a period of 2 years at a simple interest rate of 10%. Calculate his principal.

SECTION B

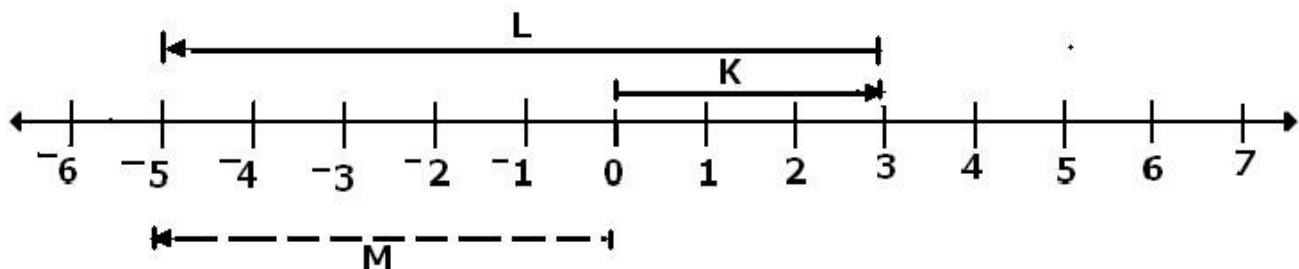
21. The pie – chart below represents 36 boxes of books in a store study it and answer the questions that follow.



(a) Find the value of x in degrees. (3marks)

(b) How many boxes contain science books? (2marks)

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



(a) Name the integers represented by: (1mark@)

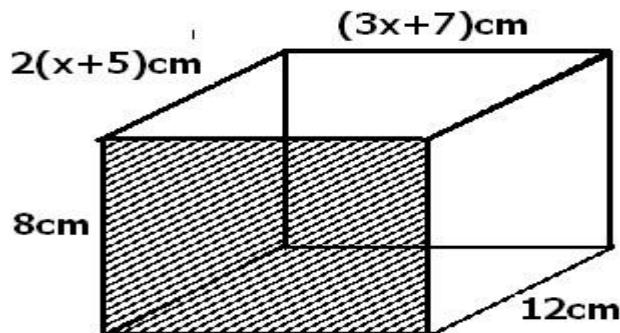
(i) $K = \underline{\hspace{2cm}}$ ii) $M = \underline{\hspace{2cm}}$ (iii) $L = \underline{\hspace{2cm}}$

(b) Write the mathematical sentence shown on the above number line. (2marks)

23(a) Solve: $2(4x - 2) - 3(x - 1) = 9$ (2marks)

(b) Solve and write a solution for $5p - 2 > 3(p + 4)$ (3marks)

24. Study the diagram below carefully and answer the following questions.



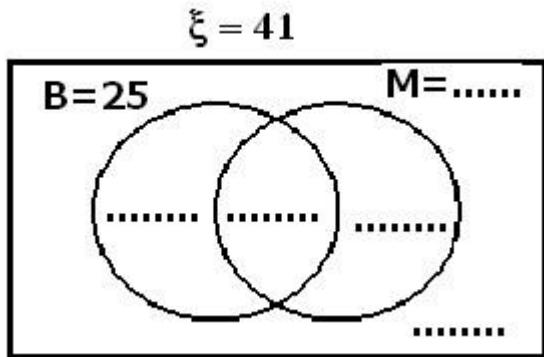
a) Calculate the value of x. (3marks)

(b) Work out the area of the shaded part. (2marks)

25. Using a ruler, a pencil and a pair of compassed only, construct a rectangle ABCD where AB = 8cm and BC = 6cm. measure the length of diagonal BD (6marks)

26. There are 41 pupils in a class. 25 like Busera (B), 7 like both Busera and Munanansi, a + 5 like Munanansi only (M) while 4 dislike the two drinks.

- (a) Complete the Venn diagram given below using the above information.
(3marks)



(b) Find the value of a.

(2 marks)

27.(a) Find the value of X in $3 + X = 2$ (finite 5)(2 marks)

(b) Use a clock dial to find the value of w in $2 - 3 = w$ (finite 5) (2 marks)

(c) Express 4678 in scientific notation (1 mark)

28. (a) The interior angle of a regular polygon is 100° more than its exterior angle. Name the polygon (3marks)

(b) Calculate its interior angle sum. (2marks)

29. In a school $\frac{1}{4}$ of the pupils are in Kabalega House and $\frac{1}{3}$ of the remainder are in Mburo House. And the rest in Kidepo House. If 145 pupils are in Kidepo House.

(a) How many pupils are in the school? (2marks)

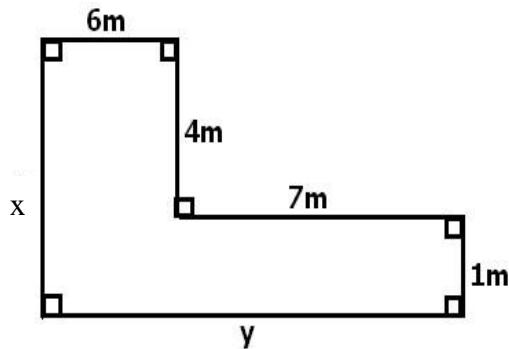
b) Simplify:
$$\frac{0.12 \times 4.2}{0.03 \times 0.7}$$
 (3marks)

30. Obeita, Oduman and Otim shared some mangoes in the ratio of 7: 2: 3 respectively. If Otim got 21,000 mangoes,

(a) How many mangoes did they share altogether? (3marks)

(b) How many more mangoes did Obeita get than Oduman?(2marks)

31. Opio has a garden of the shape shown below:



a Find the value of:

(i) X (1 mark)

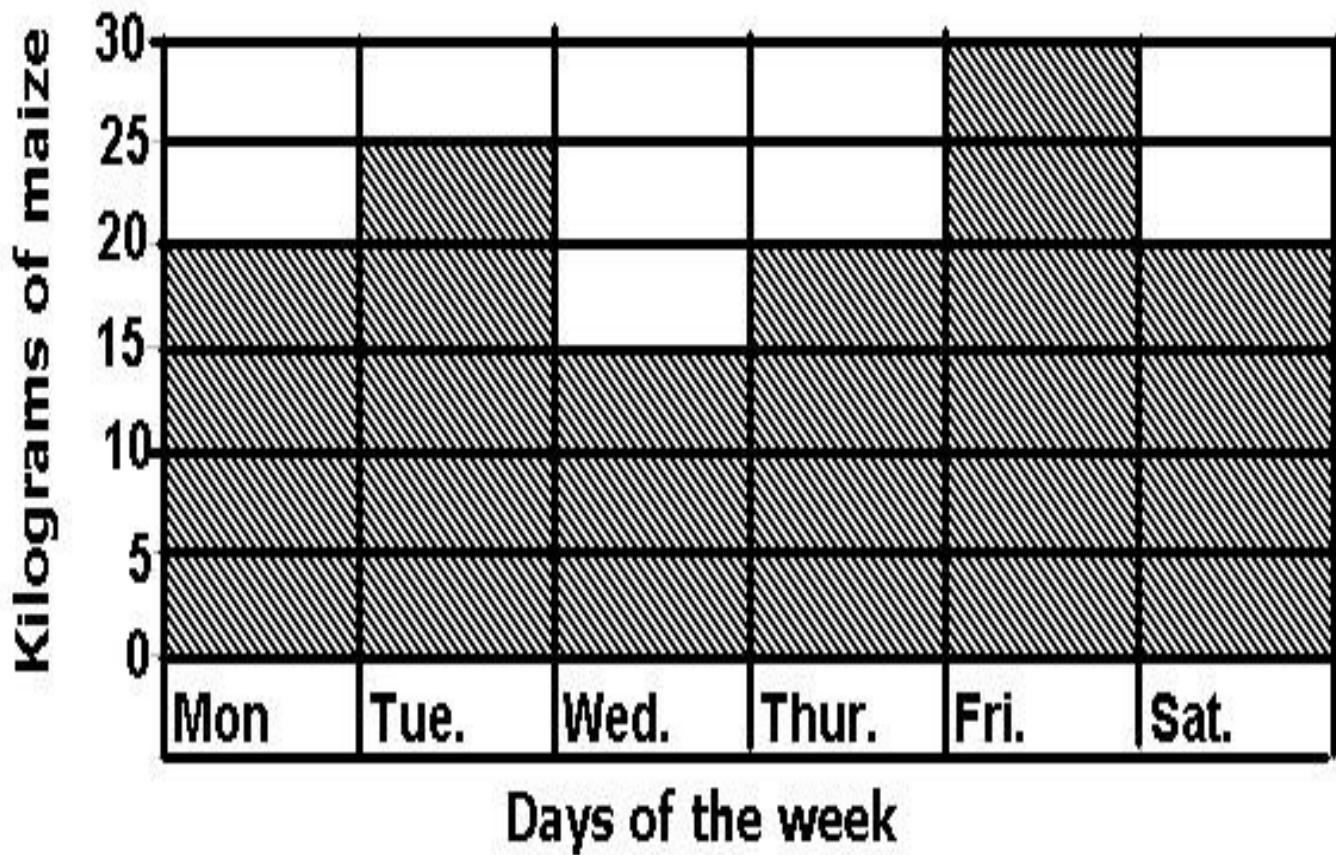
(II) Y

(1mark)

b Calculate its Perimeter.

(2marks)

32. The graph below shows kilograms of maize sold by Paul in thousands



a) On which days of the week were the sales the same? (1 mark)

b) On which days of the week was the sales the highest? (1 mark)

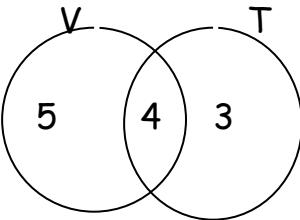
c) On which days of the week was the sales the lowest? (1 mark)

d) How many kilograms of maize were sold altogether? (2marks)

SECTION A: (40 MARKS)

1. Work out: $80 \div 4$

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.


A Venn diagram with two overlapping circles. The left circle is labeled 'V' at the top and contains the number '5'. The right circle is labeled 'T' at the top and contains the number '3'. The intersection of the two circles contains the number '4'.

4. Simplify: $9k - 4y - 3k + 5y$.

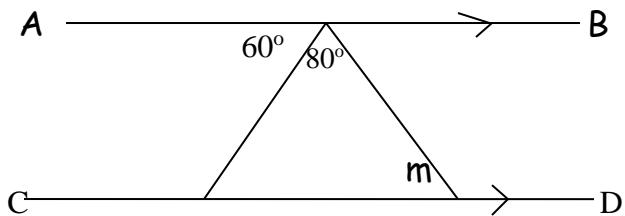
5. Work out: $\frac{3}{4} - \frac{2}{5}$

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 $22\frac{1}{2}^\circ$ 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 .

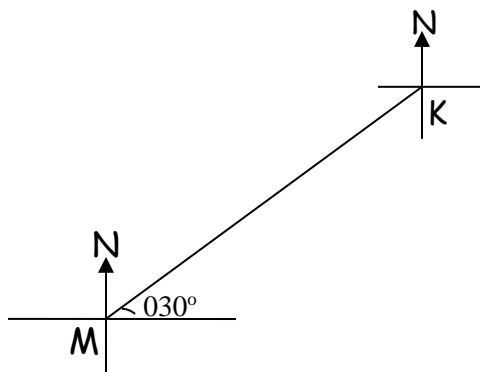


10. A meeting which lasted $1\frac{1}{3}$ hrs, ended at 5:10 p.m. What time did it start?

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.



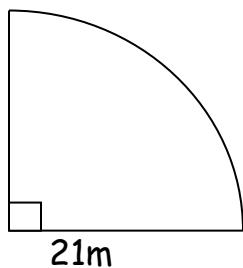
14. A woman deposited sh. 360000 on her savings account in a bank which offers an interest rate of 5% per annum. After how long will she get an interest of sh. 10500?

15. Work out: $3 \ 0 \ 3_{\text{five}}$

$$\begin{array}{r} - \\ 2 \ 2_{\text{five}} \\ \hline \end{array}$$

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.



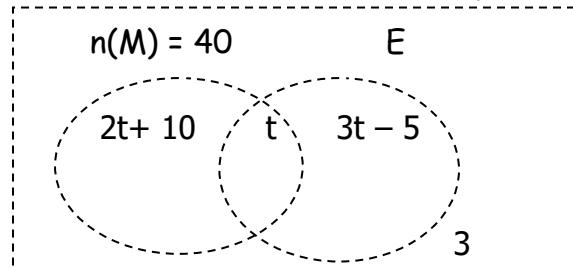
18. Mr. Mawanda walked 1800 metres in 18 minutes. Find his average speed in km/hr.

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)

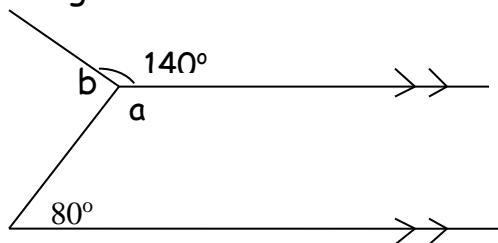
(iii) How many pupils are there altogether?

(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.

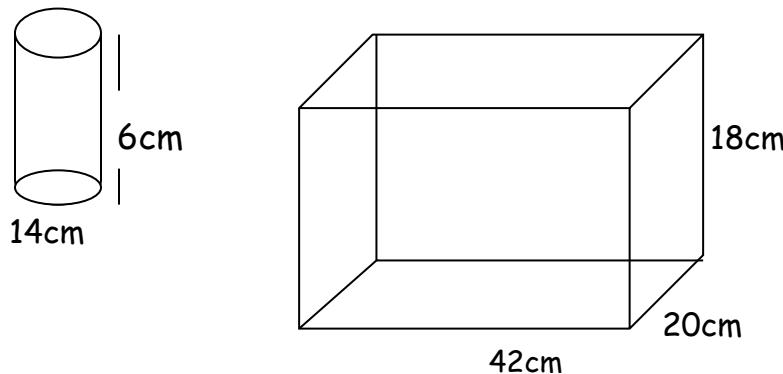
Currency	Buying price	Selling price
1 US dollar	Ug. Sh. 2500	Ug. Sh. 3000
1 K. sh.	Ug. Sh. 18	Ug sh. 25

(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.

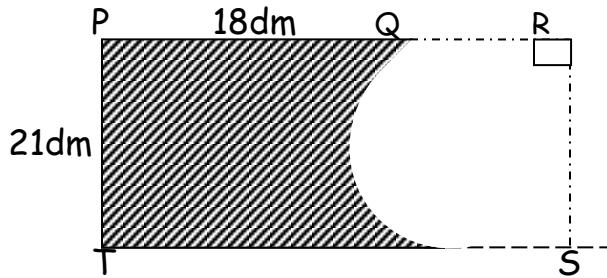


- a) How many tins can be packed in the 1st layer? (1mark)
- (b) How many layers can be packed in the tin? (1mark)
- (c) Find the volume of the space not provided after packing the tins into the box. (4 marks)

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

- (b) Find the value of n in the expression below.
 $32_n = 26_{\text{ten}}$ (2 marks)

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



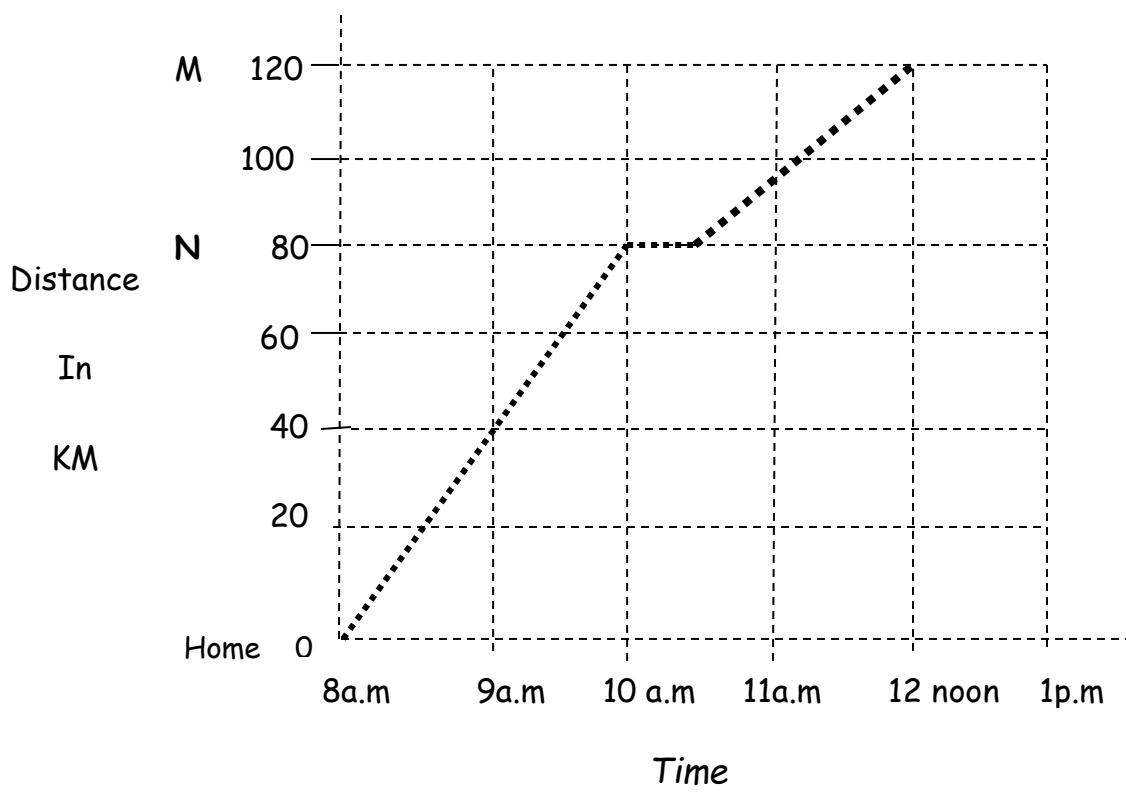
(b) What is the perimeter of figure PQST? (2 marks)

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)

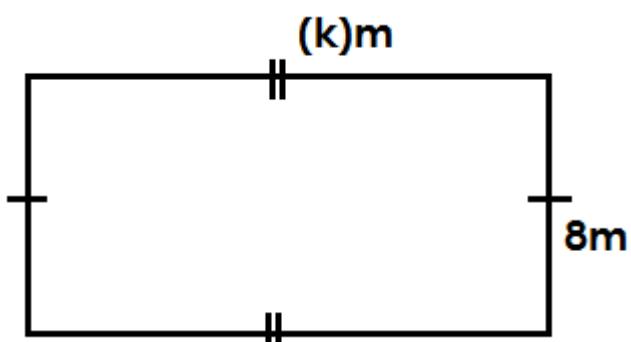
32. The graph below shows a motorist moved from home to town M via town N. Study it carefully and answer the questions that follow.



- (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: $48 \div 4$
 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: $\sqrt{3} - \sqrt{8}$.
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 $2n - 7$.

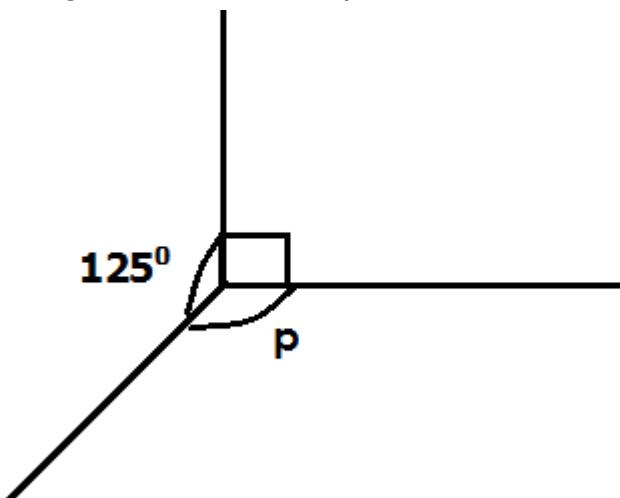
13. Work out: $\frac{3^2 \times 3^4}{3^3}$.

14. Write $8\frac{1}{3}\%$ as a fraction in its simplest form.

15. Tea is sold in $\frac{3}{4}$ kg packets. How many packets can be made from 24 kg of tea?

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

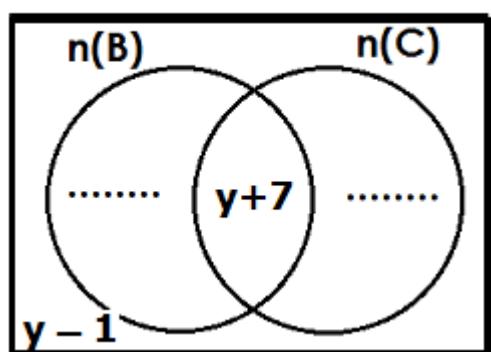
17. Study the diagram below carefully and use it to find the value of P in degrees.



18. Find the smallest number of pencils that can be shared by 24 pupils or 18 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 $1101_{\text{two}} + 110_{\text{two}}$. **(2 marks)**

(b) If $103x = 28_{\text{ten}}$, 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.**

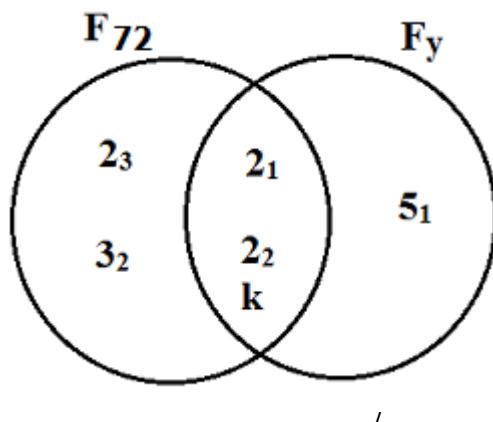
(a) How much money in total did she spend on the above items? **(4 marks)**

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

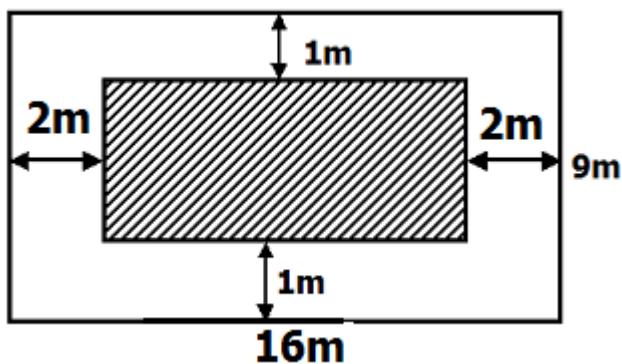
25(a). Using a pair of compasses, a ruler, and pencil only, construct a triangle KLM where LM = 7cm, angle KLM = 60^0 and angle LMK = 45^0 . Drop a perpendicular at K to meet LM at P.
(5 marks)

(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: $-6 \leq -3(k - 2)$ **(3 marks)**

(b) Find the solution set for the above inequality.

(1 mark)

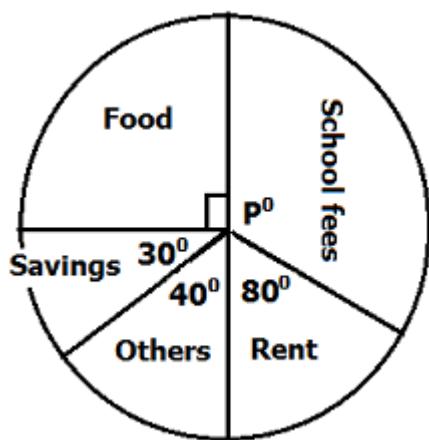
29. In a basket, $\frac{5}{8}$ of the apples are red, $\frac{1}{6}$ are yellow and the rest are green.

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

(3 marks)

(b) If there are 60 green apples in the basket, how many apples are in the basket altogether?
(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
(2 marks)

END

and B must be written in the spaces provided.

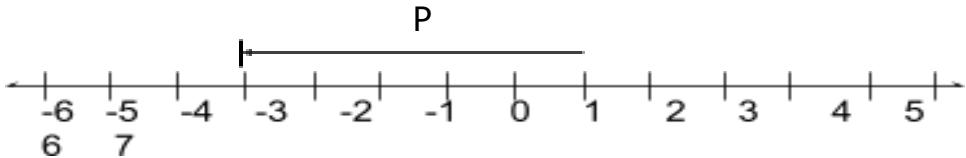
5. All answers must be written using a blue or black ball point pen or ink. Diagrams should be drawn in pencil.
6. Unnecessary alteration of work may lead to loss of marks.
7. Any handwriting that cannot be easily read may lead to loss of marks.
8. Do **not** fill anything in the boxes indicated for Examiner's use only.

Turn over

SECTION A: (40 MARKS)

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

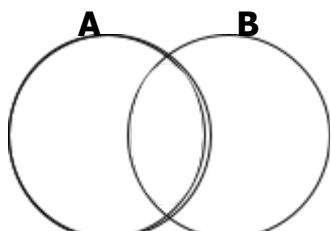
2. Write the integer shown on the number line below.



P = _____

3. Write in words; 22,202

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



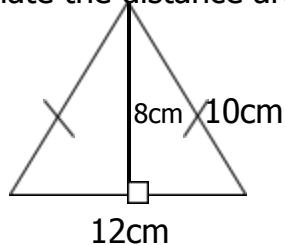
5. Work out: $\frac{1}{3} - \frac{1}{5}$

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.

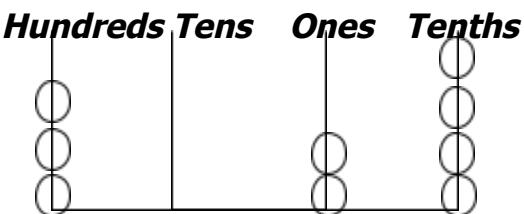
2, 4, 7, 12, 19, _____, _____

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.

$$(10 \times 3.5) + (6.5 \times 10)$$

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° .

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.
///

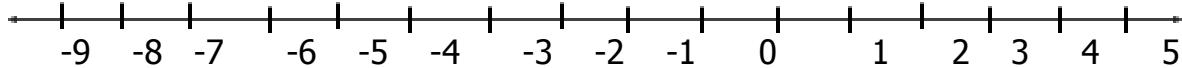
20. Add: Weeks Days
 6 4
 + 2 5

SECTION B: (60 MARKS)

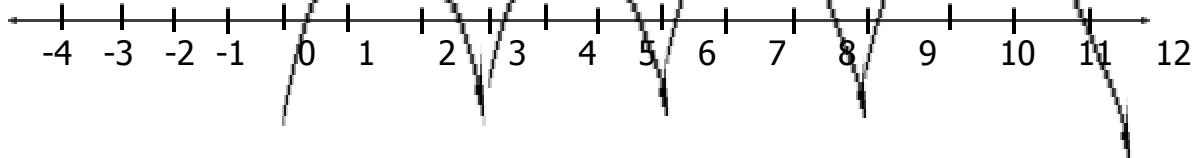
21. (a) Musoke's salary of sh. 240000 was decreased to sh. 192000 per month. Calculate the percentage decrease. *(3 marks)*

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

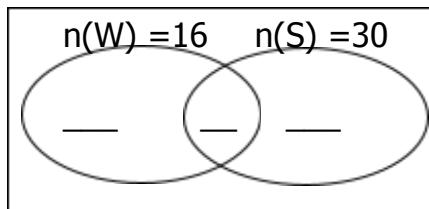
22. (a) Use a number line to work out. *(2marks)*
 $-8 + +6$



- 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)*

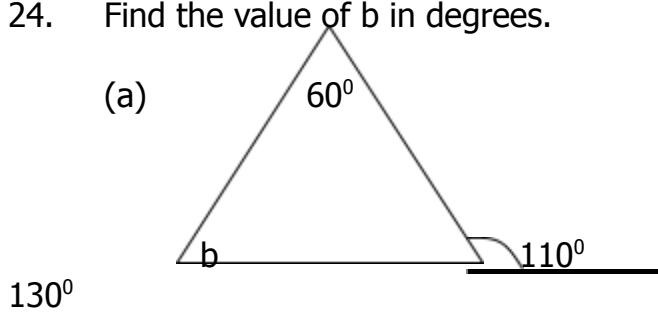


(b) How many guests took only one type of drink? *(1 mark)*

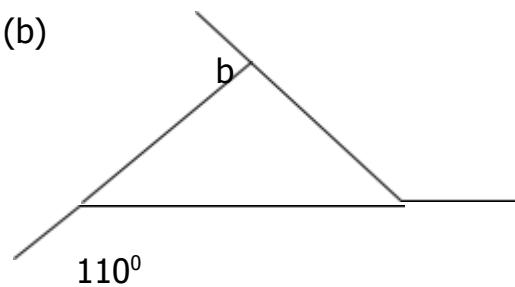
(c) How many guests attended Okello's party? *(1 mark)*

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

(a)



(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.

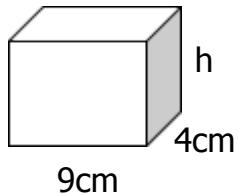
1 $\frac{1}{2}$ kg of meat at sh. 8000 per kg.

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: $\frac{0.072 + 0.018}{0.45 - 0.35}$

(3 marks)

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

(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)

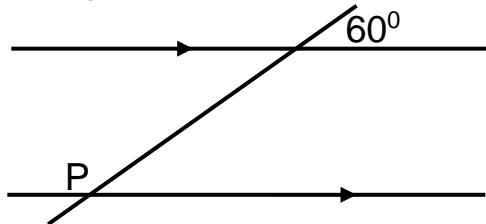
End

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° .

10. Waswa was the 9th 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.

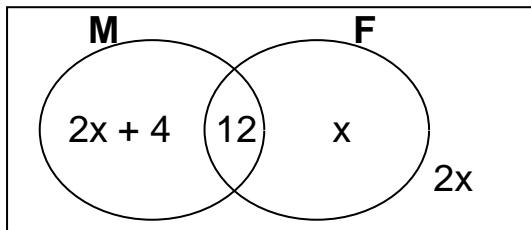
15. Workout: 0.75×0.4

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).

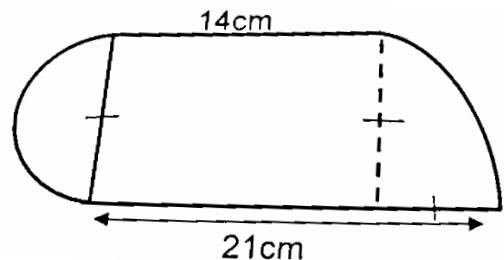


- a) If the total number of pupils in P.7 class were 56. Find the value of x.
- b) How many pupils eat fish altogether?
- c) If a pupil is picked at random to clean the black board. What is the probability of picking a pupil who does not eat any of the two?
22. During an interview, 5 marks were awarded 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 $\frac{1}{2}$ 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° .

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)

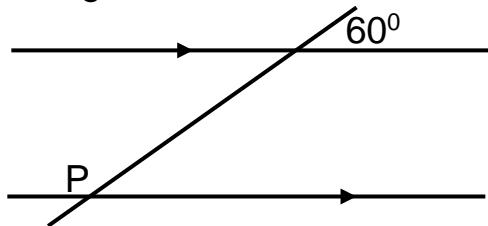
b) If 2 litres of fuel cost shs. 77 00, how much money is needed to cover the distance of 120km? (2marks)

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° .

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

11. Round off 468.49 to the nearest tenths.

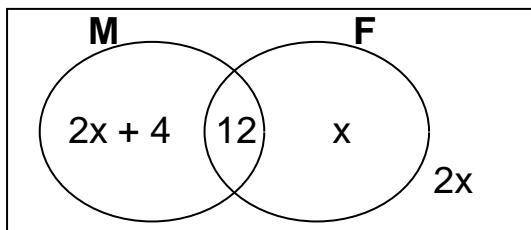
12. The total distance around a quadrant is 39dm. find its radius.
13. Express 50m/sec into km/hr.
14. The area of a square garden is 144cm^2 . Calculate the length of each side of the garden.
15. Workout: 0.75×0.4
16. Express $0.5454\dots$ as a vulgar fraction.
17. The range of consecutive integers 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

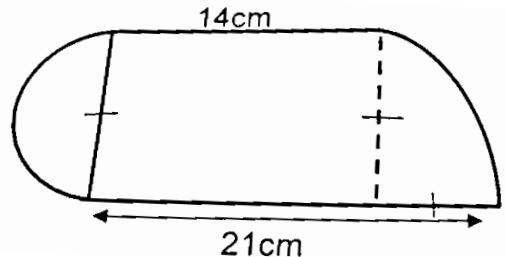
- 2kgs of beans at shs. 1500 per kg
- 500gm of salt at shs. 12,000 a kg
- 2 $\frac{1}{2}$ kg of sugar at shs. 4,000 each
- 30 tomatoes at shs. 500 for every 3 tomatoes

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° .

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

SECTION A -20 QUESTIONS (40 MARKS)

1. Work out : 434

$$\begin{array}{r} + 165 \\ \hline \end{array}$$

2. Collect like terms and simplify : $3k - 4h + 7k + 9h$

3. Write 104,346 in words.

4. Prime factorise 28 and write the prime factors in set notation.

5. Work out : $11 - 2 \times 4$

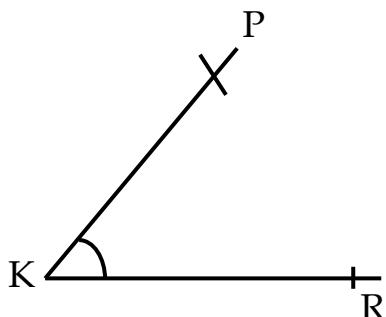
6. Given that  represents 15 girls and  represents 18 boys. How many children are represented by     ?

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.

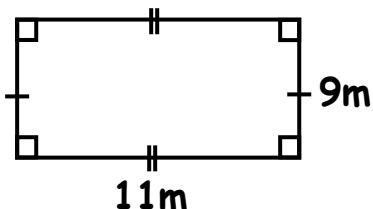
9. With the help of a protractor, measure the small angle PKR in degrees.



10. Express $0.181818\dots$ 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.



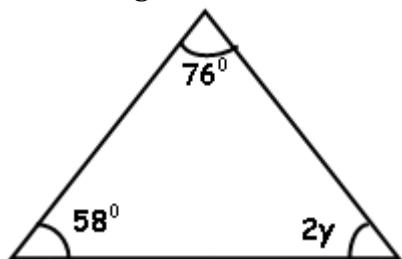
13. Work out the value of 8 in the number 16.485.

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

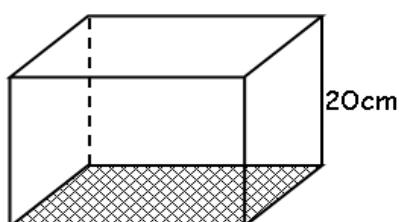
15. Find the square root of 144.

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.

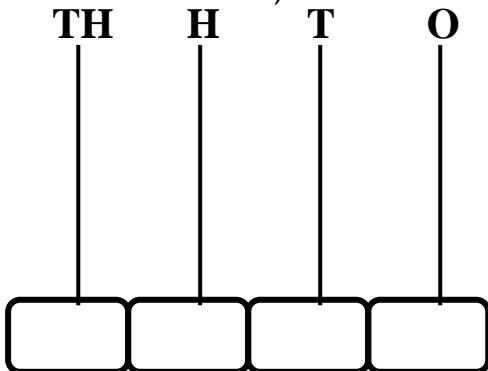


19. Set A = { 1, 3 ,4 , 6 , 7 } and Set Q = { 0 , 6 , 9 , 12 } . Find n (A \cup Q)

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)

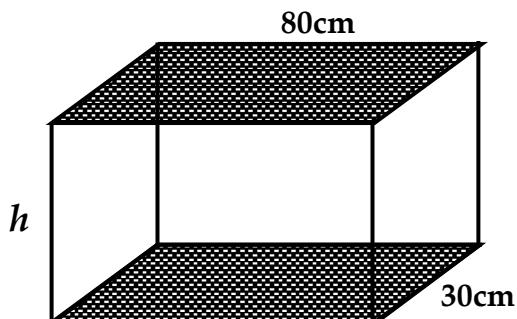
25.a) Work out : $\frac{3}{4} \div 1\frac{1}{4} \times \frac{5}{9}$ (2 marks)

b) Simplify : $\frac{0.72 \times 1.2}{0.4 \times 0.9}$ (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° and line **MN** = 8cm. (4 marks)

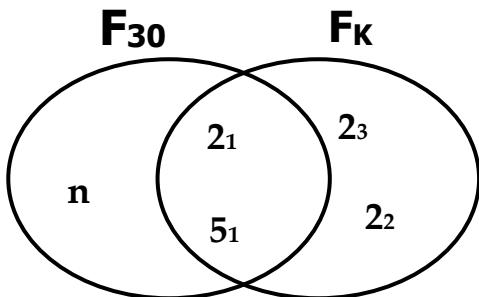
- b) Measure length of line **NT**.....(1 mark)

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

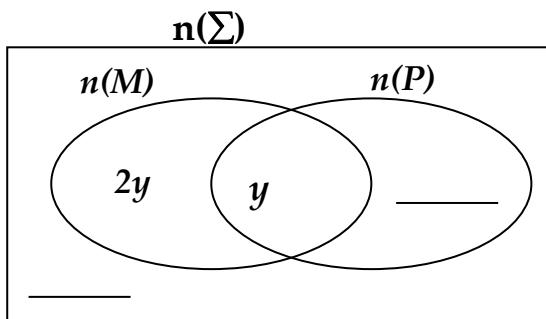
ii) LCM of k and 30

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.

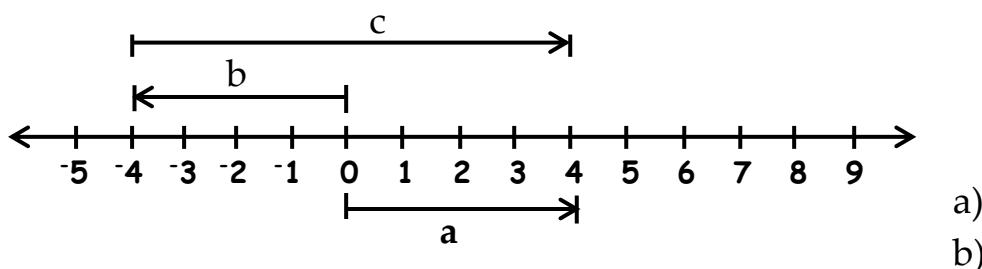
a) How long did the motorist take to travel from town T to town R? (2 marks)

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)

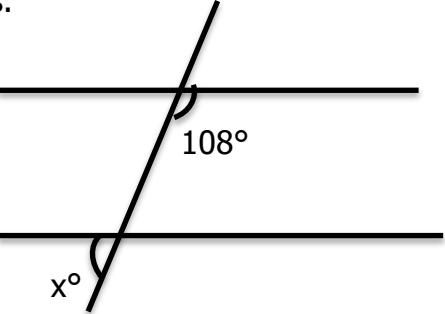
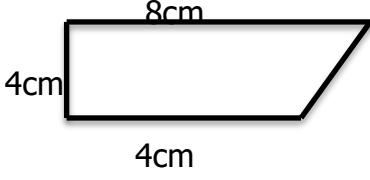
a) Write the integers represented by;

(3 marks)

- Arrow a
- Arrow b.....
- Arrow c

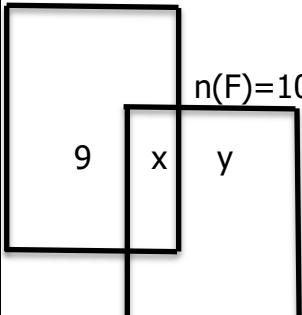
b) Write the mathematical statement represented on the number line. (1 mark)

1.Add $0.4 + 0.8$	2.	<p>Find the next number in the sequence.</p> <p>$\frac{1}{2}, \frac{1}{4}, \frac{1}{8}, \frac{1}{16}, \underline{\hspace{2cm}}, \underline{\hspace{2cm}}$</p>
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 $\frac{1}{4} \div \frac{3}{5}$	6	A bus broke down after covering $\frac{5}{7}$ 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 $\frac{1}{3}$ of Gala's salary is sh.16000, What is his salary?

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

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. $(2 \times 10^1) + (4 \times 10^2) + (3 \times 10^0) + (5 \times 10^{-1})$		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 $1\frac{1}{2}$ hours at a speed of 50km/hr?
23a) Given that $\frac{2}{3}$ of Annet's salary is equal to $\frac{3}{4}$ 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 <u>0.32×1.2</u> 0.016	24b	Find the multiplicative inverse of $\frac{2}{3}$

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

a)Find the value of x.		
b)Find the value of y	28b	If a goat costs 30 US dollars,what will be the cost of the goat in Kenyan shillings(ksh.)
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.	29a)	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

30b

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

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

31

Jane bought the following items from the market.

3kg of sugar at sh.1400 per kg

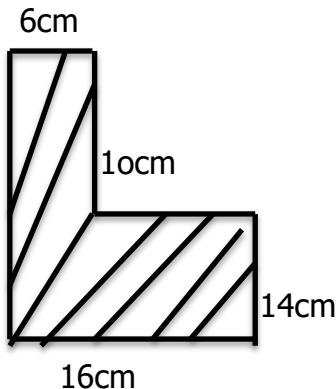
1½kg of rice at 4000 per kg

2½ litres of paraffin at sh.3500 per litre.

8 oranges at sh.200 per orange.

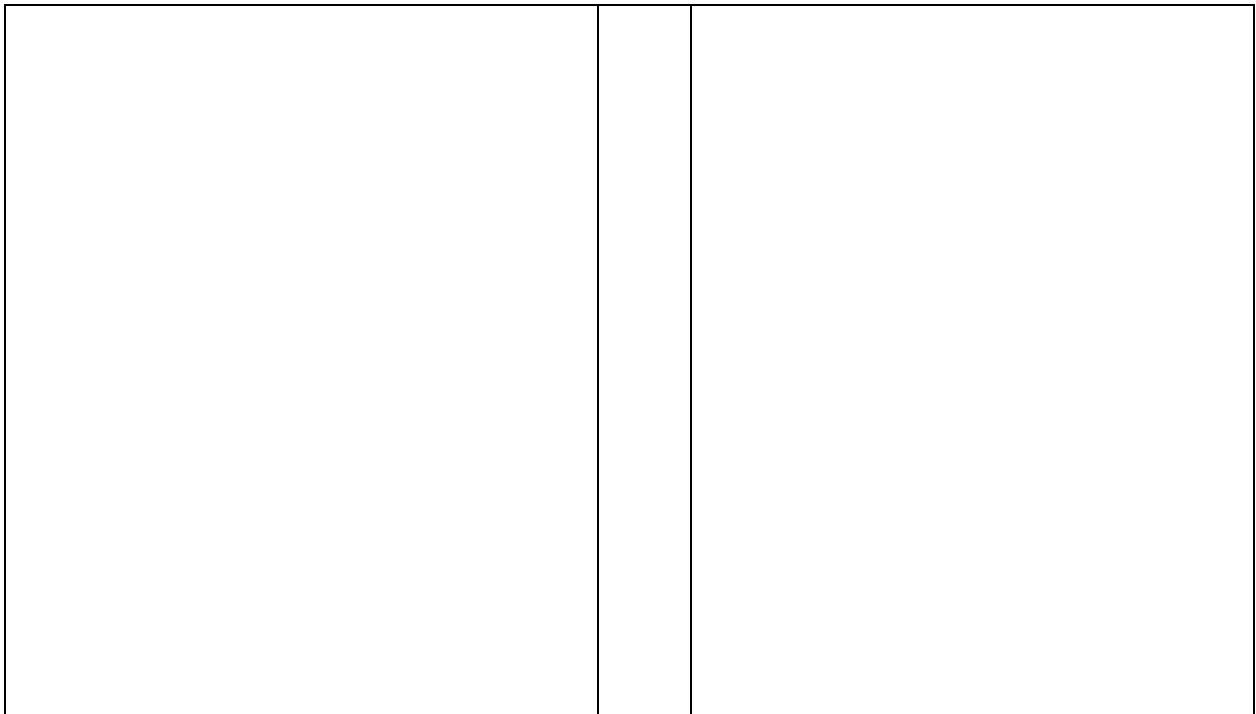
If Jane remained with only sh.5000, find the total amount of money she had.

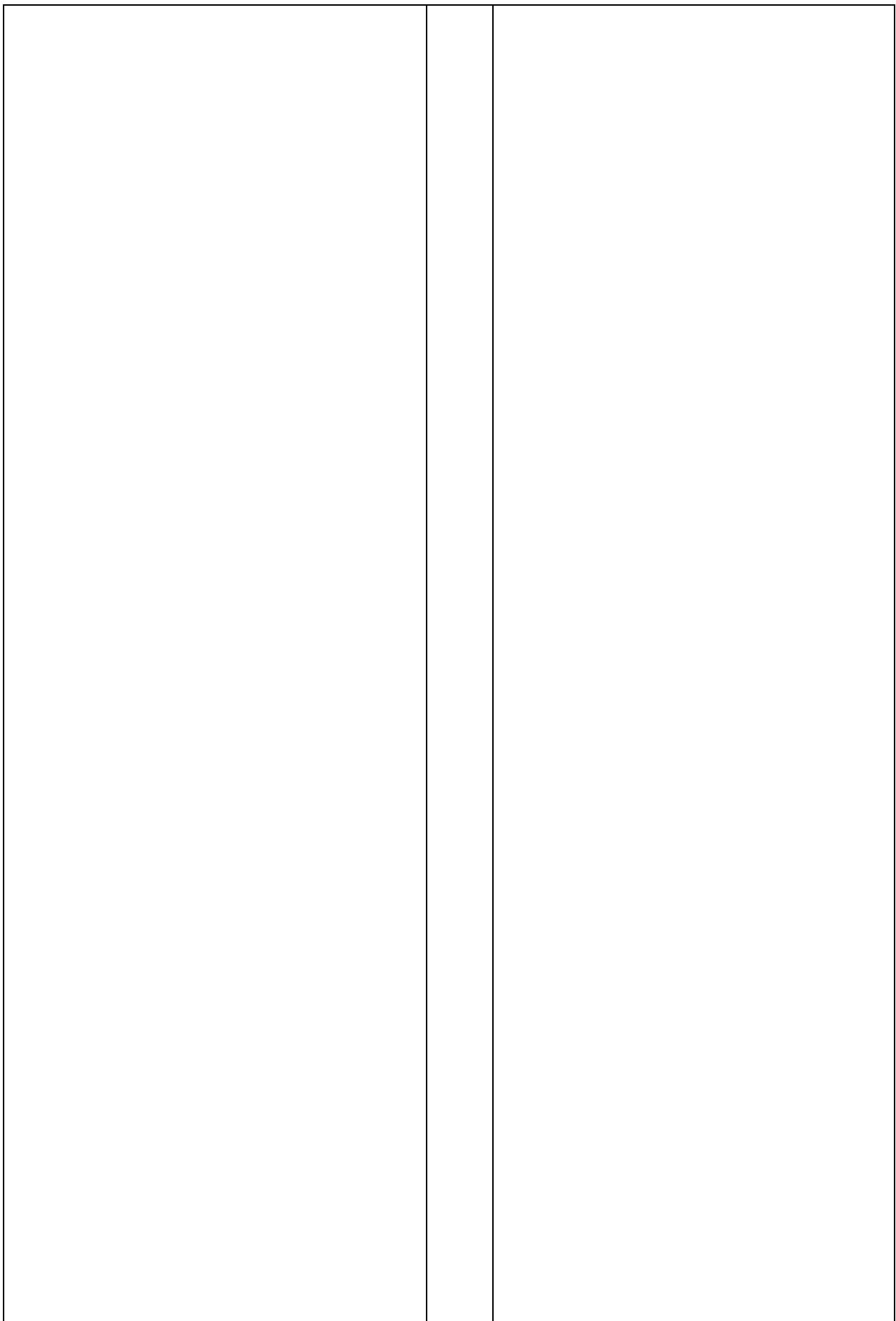
30. The diagram below shows a lawn

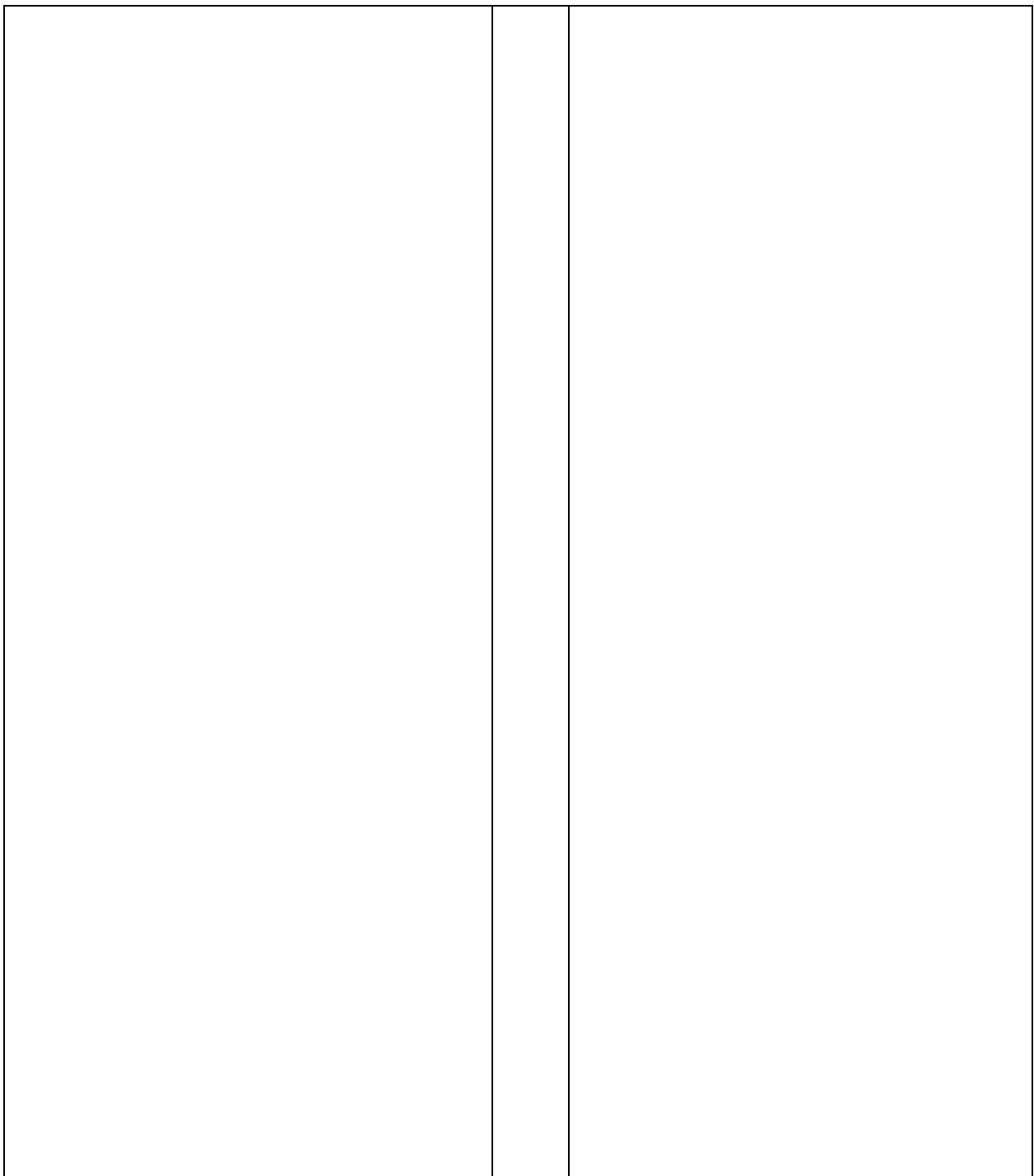


a) Find the area of the lawn

	b	<p>How much money was collected from those who reached Lukaya if each paid sh.15000.</p>
<p>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.</p> <p>a) How many passengers reached Masaka town?</p>		<p>END AND GOOD LUCK</p>







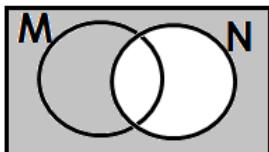
SECTION A

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.



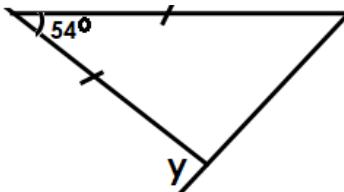
5. Fill in the last two numbers

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

6. Subtract: $\begin{array}{r} 203_{\text{five}} \\ - 14_{\text{five}} \\ \hline \end{array}$

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 $2\frac{1}{2}\%$ in a maths contest. What fraction of the work did Peter get?

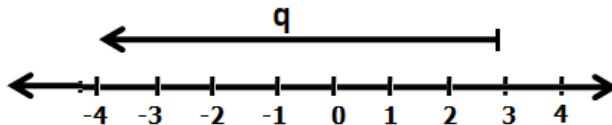
10. The circumference of a church's circular compound is 44m. Find its radius.

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.

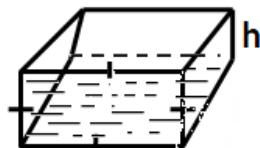
14. A pack of 53 playing cards has 4 kings, 4 queens, 4 jacks and 4 aces and others. What is the chance of picking a queen at random?

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° .

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



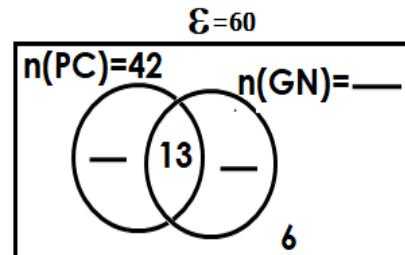
19. The school fees in school A in Gulu city is Three times that one of B. Find the amount of money paid by a child who goes to school B, if the difference in the structure is sh. 600,000.

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), 18 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)

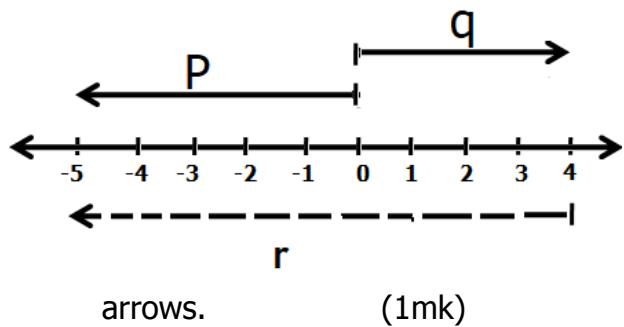
23. a) Workout: $\frac{0.021 \times 7.2}{0.9 \times 0.035}$ (3mks)

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.



$$q =$$

$$p =$$

$$r =$$

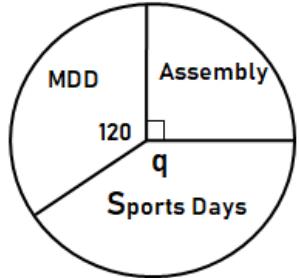
b) Write the mathematical sentence represented above. (2mks)

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 $\frac{1}{2}$ of the land on a Thursday. $\frac{1}{4}$ of the remainder on Friday. If she completed 24m^2 on Saturday, how big was the whole land in sq.meters.

(5mks)

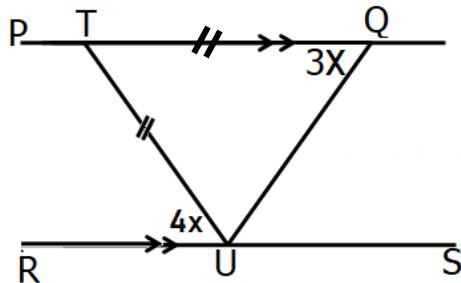
29. Toto went shopping with 3 notes of sh.20000 each and bought the following items.

- 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)

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



a) Find the value x in degrees.

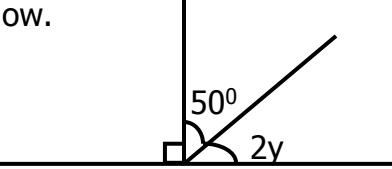
b) Calculate angle QTU.

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)

-THE END-

SECTION A: 40 MARKS

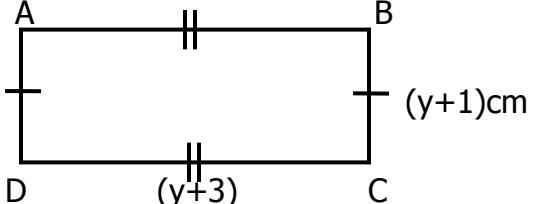
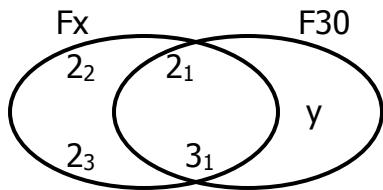
1.	Work out: 34×3	2.	Write XCIX in Hindu Arabic numerals.
3.	Simplify: $a^6 \div a^3$	4.	How many $\frac{1}{4}$ kg packets of sugar can be got from 20kg?
5.	Find the square root of $1 \frac{7}{9}$	6.	Find the size of angle y in the figure below. 
7.	Musa deposited sh.400,000 in the bank that offers an interest rate of 5% per month for $1 \frac{1}{2}$ 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° .

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: $2 - 5 = \underline{\hspace{2cm}}$ (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?

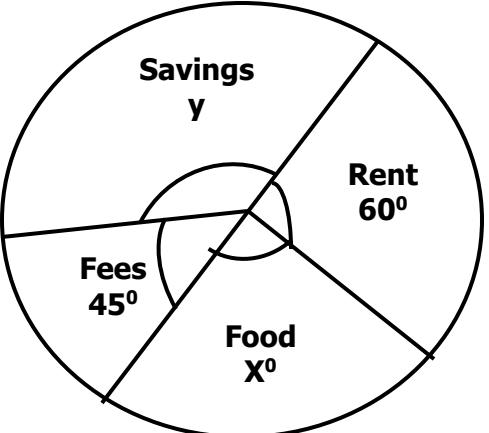
SECTION B: 60 MARKS

<p>21. In a class of 50 pupils, h like Posho(P), 25 like rice (R), 15 like both posho and rice while 5 pupils do not like any of the two types of food.</p> <p>a) Complete the Venn diagram below. (3mks)</p> <p>$n(\Sigma) = 50$</p>	<p>22. The figure below is a cuboid. Use it to answer the questions that follow.</p> <p>a) How many litres of water can the figure above hold when it is completely full? (2mks)</p> <p>b) Work out the total surface area of the figure above. (2mks)</p>
<p>23. Two bells ring at the intervals of 30 minutes, 40 minutes respectively. If they rang together at 10:50am,</p> <p>a) After how long will the two bells ring together again? (3mks)</p> <p>b) At what time will the two bells ring together again? (2mks)</p>	

24.	<p>a) Using a ruler and a pair of compasses only, construct a triangle ABC in which AB =7cm, AC=5cm and angle BAC = 120°. (4mks)</p> <p>b) Measure the line BC. (1mk)</p>																								
25.	<p>The table below shows the marks scored by pupils in a mathematics test.</p> <table border="1" data-bbox="236 855 1106 950"> <tr> <td>Marks scored</td><td>80</td><td>70</td><td>90</td><td>60</td></tr> <tr> <td>Number of pupils</td><td>2</td><td>3</td><td>1</td><td>4</td></tr> </table> <p>a) How many pupils sat for the test? (2mks)</p> <p>b) Work out the mean score of their marks. (3mks)</p>	Marks scored	80	70	90	60	Number of pupils	2	3	1	4														
Marks scored	80	70	90	60																					
Number of pupils	2	3	1	4																					
26.	<p>Mary went to the market and bought the items as shown on the table below.</p> <table border="1" data-bbox="236 1467 1493 1763"> <thead> <tr> <th>Item</th><th>Quantity</th><th>Unit price</th><th>Total cost</th></tr> </thead> <tbody> <tr> <td>Sugar</td><td>.....kg</td><td>Sh.3,000per kg</td><td>Sh. 9,000</td></tr> <tr> <td>Meat</td><td>2kg</td><td>Sh. 10,000 per kg</td><td>Sh.</td></tr> <tr> <td>Milk</td><td>1 $\frac{1}{2}$ litres</td><td>Sh.....each litre</td><td>Sh. 4,500</td></tr> <tr> <td>Bread</td><td>3 loaves</td><td>Sh.@loaf</td><td>Sh. 13,500</td></tr> <tr> <td></td><td>Total expenditure</td><td></td><td>Sh.</td></tr> </tbody> </table> <p>a) Complete the table above. (5marks)</p>	Item	Quantity	Unit price	Total cost	Sugarkg	Sh.3,000per kg	Sh. 9,000	Meat	2kg	Sh. 10,000 per kg	Sh.	Milk	1 $\frac{1}{2}$ litres	Sh.....each litre	Sh. 4,500	Bread	3 loaves	Sh.@loaf	Sh. 13,500		Total expenditure		Sh.
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	Total expenditure		Sh.																						

	b) If she was given a discount of 10%, how much money did she pay? (1mk)
27.	<p>The perimeter of the rectangle below is 28cm. study it carefully and use it to answer the questions that follow.</p>  <p>a) Find the value of y. (2mks)</p> <p>b) Work out the area of the figure above. (2mks)</p>
28.	<p>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?</p>
29.	<p>The Venn diagram below represents the prime factors of two numbers. Use it to answer the questions that follow.</p>  <p>a) Find the value of x. (2mks)</p>

	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.	<p>The pie – chart below shows Muzorewa's monthly expenditure. Use it to answer the questions that follow.</p>  <p>a) Find the value of y in degrees. (2mks)</p> <p>b) Work out the size of angle marked x. (2mks)</p> <p>c) If he spends sh.180,000 on rent, find his monthly income. (2mks)</p>

SECTION A: (40 MARKS)

1. Workout $95 - 62$

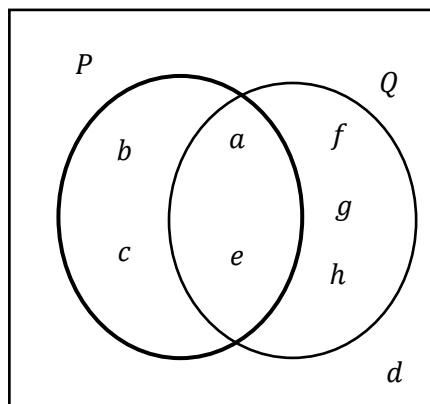
2. Write in figure Eighty eight thousand eighteen

3. Simplify: $\frac{2}{3}(6m - 9)$

4. What is the next numbers in the sequence below?

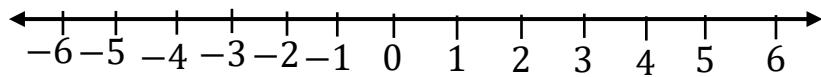
1, 8, 27, 64, _____

5. The Venn diagram below shows sets **P** and **Q**. Use it to answer the question that follow

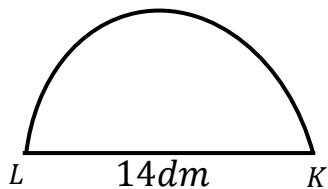


Find $n(P \cap Q)'$

6. Workout: 3×-2 using the number line below



7. Express **$15m/s$** in **km/h**
8. A lady withdrew ten thousand shillings notes numbered consecutively from **$BX2459915$** to **$BX2459964$** . How much did she withdraw?
9. Workout: $1\frac{7}{12} - \frac{5}{6}$
10. The temperature of ice taken at intervals of one hour were; **$-10^{\circ}c$** , **$-7^{\circ}c$** , **$-15^{\circ}c$** and **$-5^{\circ}c$** respectively. What was the range of the temperature?
11. The figure below is a semi-circle with diameter **$\overline{LK} = 14dm$** as shown



Calculate the perimeter of the whole figure $\left(\text{Take } \pi = 3 \frac{1}{7} \right)$



12. Solve $10 - 2n = 4$

13. A motorist travelling from Kitgum to Nakasongola a distance of **360km** left at 7:30am. At what speed must he ride in order to reach Nakasongola at exactly 12:00 noon?

14. What number has been expanded to get $(7 \times 10^3) + (3 \times 10^1) + (9 \times 10^{-2})$?

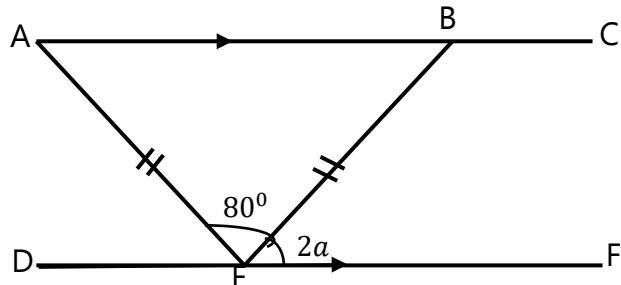
15. A cylindrical container has a capacity of 15.4 litres. Given that the container has a radius of 7cm, find its height (Take $\pi = \frac{22}{7}$)

16. Workout: $2 - 5 = \underline{\hspace{2cm}}$ (*finite 7*)



17. In a school, $\frac{1}{5}$ of the candidates passed in division 1 and the rest in division 2 and 3. The percentage of those who passed in division 2 was 10% more than those in division 3, what percentage passed in division 3?

18. In the figure below line \overline{AC} , is parallel to \overline{DF} , \overline{AE} ,



Find the value of a

19. Using distributive property, workout $(50 \div 3) - (29 \div 3)$



20. With the help of a ruler, pencils and pairs of compasses only, construct an angle of 135° in the space below.

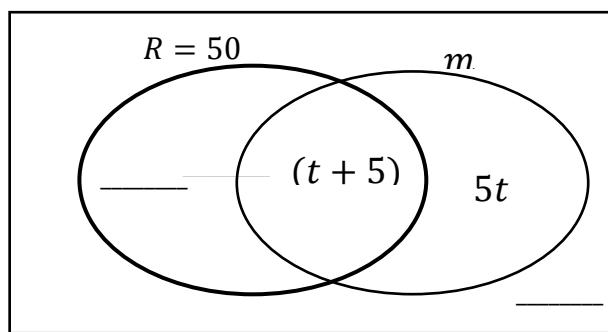
SECTION B: (60 MARKS)

21.(a) Write 0.00205 in standard form

(b) Given that $37_n = 42_{eight}$. Find the value of n

22. In a certain village, 50 farmers grow Rice (R), $5t$ farmers grow maize (M) only, $(t + 5)$ farmers grow both Rice and Maize while 10 farmers grow neither of the two crops

(a) Complete the Venn diagram below

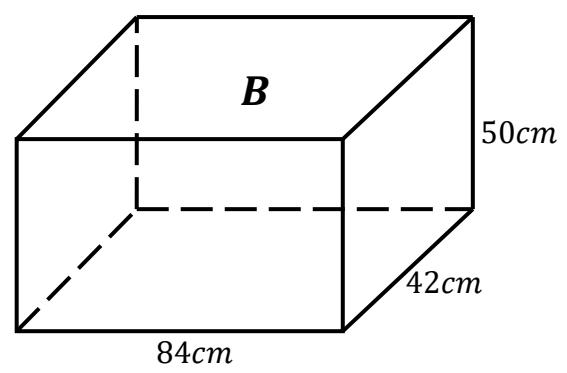
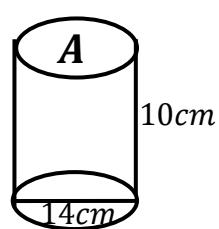


(b) Given that 40 farmers do not grow Rice. How many farmers grow Rice Only?

23.(a) Express $0.1818 \dots \dots \dots$ as a common fraction in its lowest term

(b). Simplify: $5\frac{1}{4} \div 1\frac{1}{8} \times \frac{3}{7}$

24. In a factory, cooking oil in cylinder tins of size **A** are packed in boxes of size **B**



(a) How many tins of size A can be packed in box B to make it full?

(b) How many boxes would be required to pack 720 tins of cooking oil

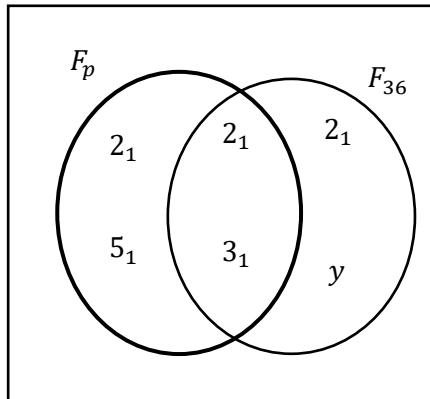
25. A cook went to a supermarket and bought the items shown in the table below

Item	Quantity	Unit cost	Amount
Milk	4 $\frac{1}{2}$ litres	Shs 1,200 per Kg	Shs
Soap bars	Shs 4,600 per bar	Shs 9,200
Salt	500gm	Shsper Kg	Shs 1,000
Meat kg	Shs 12,000 per Kg	Shs
Total expenditure			Shs 57,600

(a) Complete the table

(b) How much would he pay if he is given discount of 15%

26. The Venn diagram below shows the prime factor of P and 36. Use it to answer the questions that follow



- (a) Find the value of p

- (b) What is the value of y ?

- (c) Calculate the LCM of P and 36.

27.(a) Using a ruler, pencils and pair of compasses only, construct triangle STU in which $ST = 7\text{cm}$, angle $STU = 45^\circ$ and $TUS = 75^\circ$

- (b) Measure the length $TU = \underline{\hspace{2cm}}$



28. A commercial farmer borrowed some money from a village SACCO which offers loans at an interest rate of $1\frac{1}{5}\%$ per month for a period of 2 years.

(a) How much did he borrow if he paid a total interest of Shs 144,000?

(b) Calculate the amount of money he paid back to the village SAACO at the end of two years

29.(a) Solve $5r - 2(r + 1) = 1$

(b) Mary is 8 years younger than Daniel. Their total age is 18 years. How old is Mary?

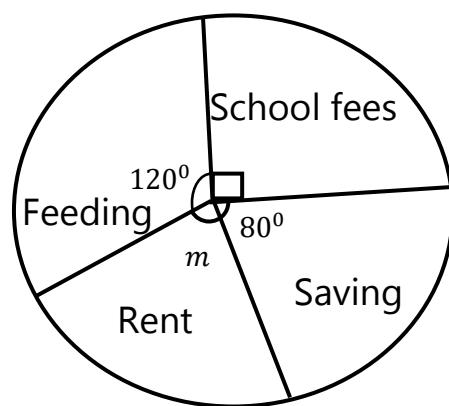


30. The ratio of the interior angle to the exterior angle of a regular polygon is 7: 2.

(a) How many sides has the polygon?

(b) Calculate the interior angle sum of the polygon

31. The pie-chart below shows how a woman spends her monthly salary. Use it to answer questions that follow



(a) Find the value of m



(b) If the amount she spends on feeding is ***Shs 70,000*** more than that of rent, how much is her monthly salary?

32. A taxi driver driving at a speed of ***65km/h*** left Town A at 8:00am and arrived in Town B at 10:30am. He rested for one hour at Town B and continued to Town Q a distance of ***160 km*** from Town B for 1hour 30minutes.

(a) How far is Town B from A

(b) Calculate the average speed for the whole journey

SECTION A: 40 MARKS

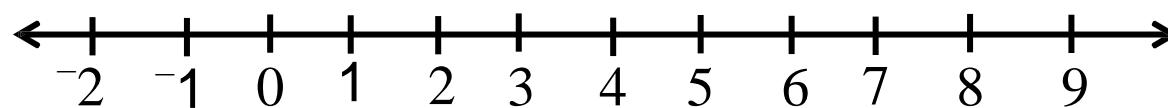
Answer **all** questions in this Section

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

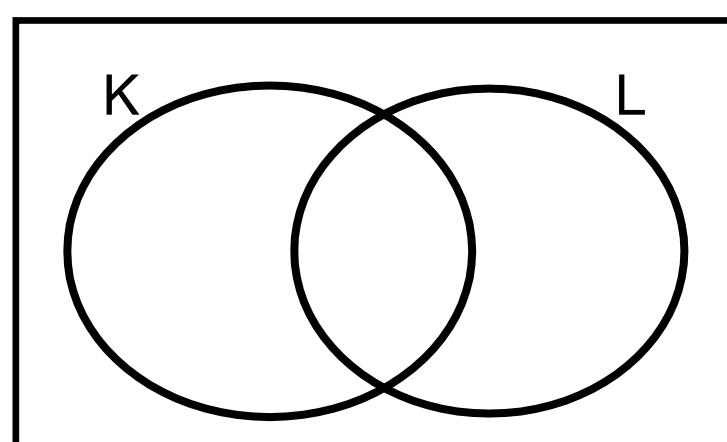
1. Work out: $22 \div 2 =$

2. Change $\frac{9}{11}$ in to a decimal fraction.

3. Show $+3$ – $+9$ on the number line below

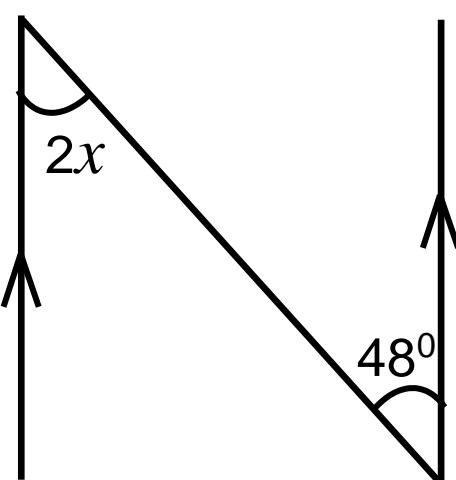


4. If $K = \{ c, o, v, i, d \}$ and $L = \{ v, i, r, u, s \}$. Represent the information above on the Venn diagram below.

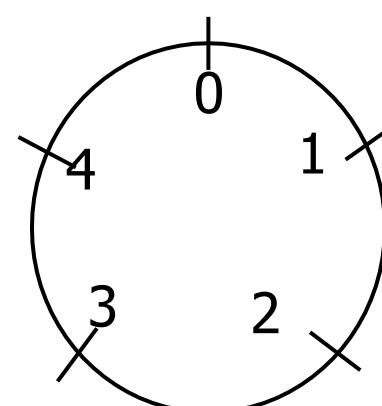


5. Tracy borrowed sh:400,000 from Post Bank Uganda which gives an interest rate of $2\frac{1}{2}\%$ per month for a period of 9 months. How much money will she pay back after the end of the period?

6. Find the value of x in degrees in the figure below.



7. Calculate 3×4 (finite 5) using the dial below.

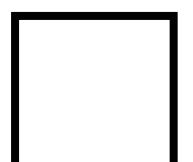


8. Find the next two number in the series below,

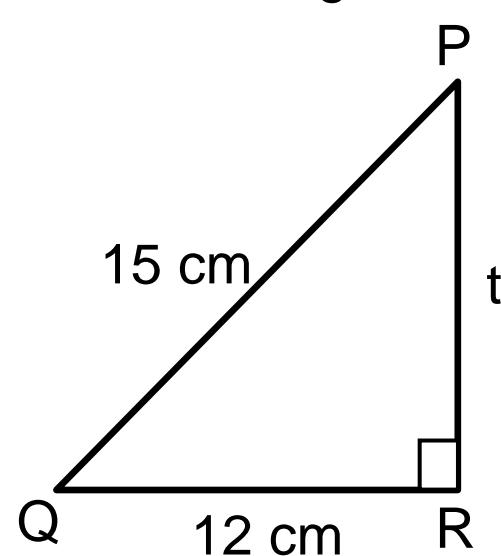
216, 125, 64, 27,,

9. Find the area of a quadrant of a circle with radius 14cm. (Use $\pi = \frac{22}{7}$)

10. A box of masks was bought at shs.8,000 and sold at shs.9,000.
Calculate the percentage profit.



11. Find the value of t in the diagram below.



12. How many centimeters are equivalent to 0.04km?
13. Solve the inequality: $2(3 - y) \leq 4$ and write the solution set that satisfies it.
14. Ali has a total of 24 bags of maize and beans in his store. If $33\frac{1}{3}\%$ is Maize, how many bags of beans are in the store?
15. One US dollar costs shillings 3,500. How many US dollars will Mutebi who has Uganda shillings 105,000 get?



16. Six boys complete a piece of work in 32 hours. How many more boys are needed to complete the same piece of work in 12 hours, working at the same rate?
17. Calculate: $1\ 1\ 0\ 1_{\text{two}} \times 1\ 1_{\text{two}}$
18. Using a pencil, ruler and a pair of compasses only, construct an angle of 105° in the space below.

19. Given that $p = 2$, $q = 3$ and $r = 4$. Find the value of $p^3 - qr$
20. Kemigisha has to fence around her rectangular plot of land 225m by 165m. How many poles will she need if the fencing poles will be 3m apart?



SECTION B: 60 MARKS

Answer all questions in this section

Marks for each question are indicated in brackets

21. The table below shows marks scored by P.7 pupils in Napak Primary School.

Marks	60	80	50	70
Number of pupils	1	3	k	2

- (a) If 10 pupils did the test, find the value of K. (02 Marks)

- (b) How many pupils passed above the average score? (03 Marks)
22. (a) Using a ruler, pencil and a pair of compasses only, construct a Triangle ABC in which AB = 6cm, Angle ABC = 30° and angle BAC is 90° in the space below. (04 Marks)
- (b) Find the area of the triangle above. (02 Marks)

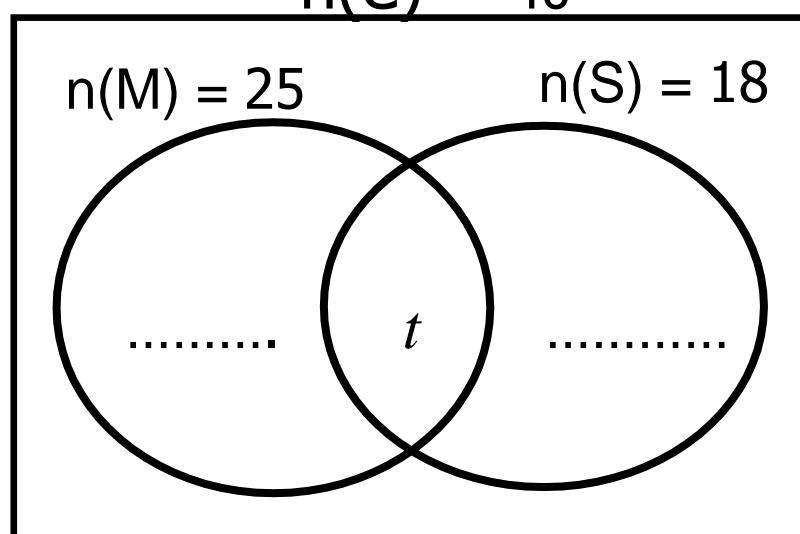


23. In BukiTera Primary School, there are 40 pupils in Primary Seven, 25 pupils like wearing Mask (M), 18 pupils like Sanitizing (S), t like both wearing Mask and Sanitizing.

(a) Complete the above information on the Venn diagram below

$$n(\mathcal{E}) = 40$$

(02 Marks)



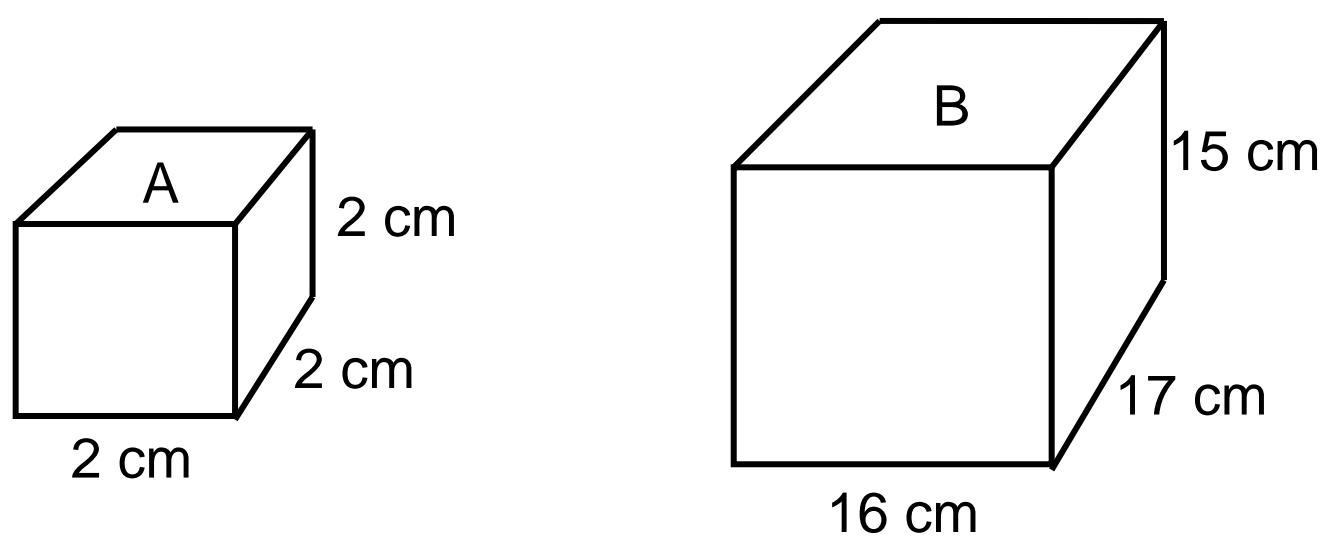
(b) Find $n(t)$.

(02 Marks)

(c) Work out $n(s)'$

(01 Mark)

24. Nabirye was given a task of packing small cubes (A) into box (B).
Study the two diagrams below and answer questions that follow.



- (a) How many small cubes will be packed in the bottom layer? (02 Marks)
- (b) How many layers will he make to fill the box? (01 Mark)
- (c) Calculate the space left to fill the box. (03 Marks)

25. (a) To each of the numbers 30 and 45, x is added and the ratio of the resulting number is 8:11 respectively. What is x and what are the two resulting numbers? (03 Marks)

(b) Find the **GCF** of the two resulting numbers. (01 Mark)

26. The time table below shows the route taken by YY Coaches Bus.

TOWN	ARRIVAL TIME	DEPARTURE TIME
Kampala		6:00am
Iganga	7:00am	7:15am
Mbale	10:00am	10:30am
Soroti	1:00pm	1:30pm
Lira	7:00pm	

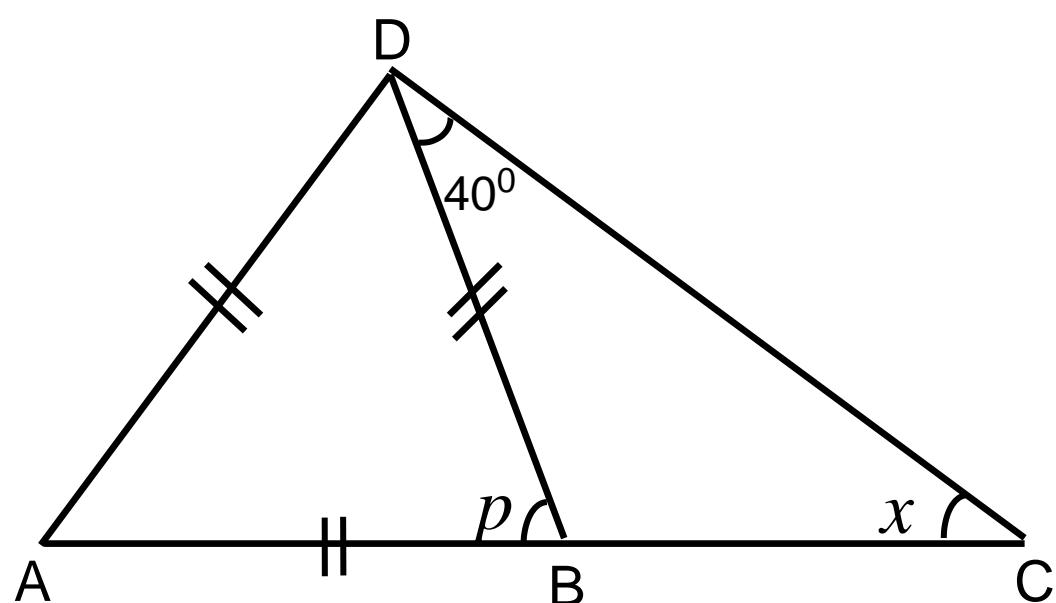
(a) How long did the bus take to move from Kampala to Lira? (01 Mark)

(b) For how long did the bus stay in Mbale? (01 Mark)

(c) Write the departure time from Iganga in 24 hour clock system
(01 Mark)

(d) What is the duration for the journey from Iganga to Soroti?
(02 Marks)

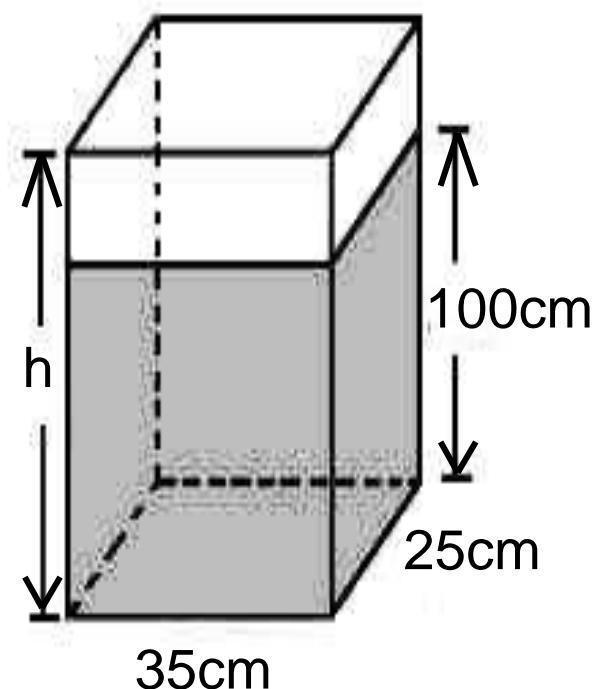
27. Study the figure below and answer questions that follow.



(a) Find the size of angle P .
(02 Marks)

(b) Find the value of angle X .
(02 Marks)

28. The rectangular tin below is $\frac{2}{3}$ full of milk. Study it and use it to answer questions that follow.



(a) Find the height of the tin. (04 Marks)

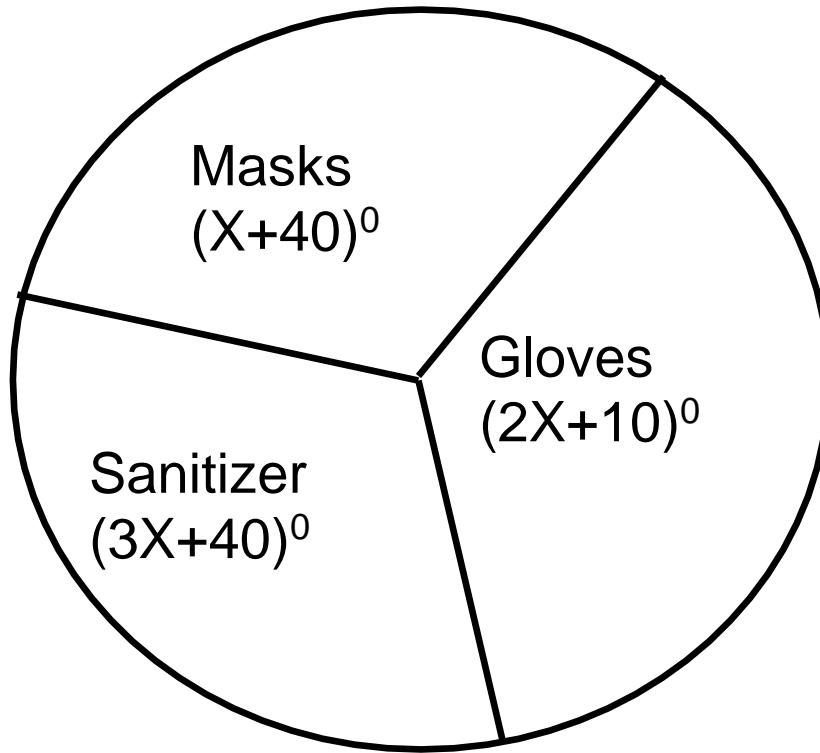
(b) Find the volume of the milk needed to fill the tank in cm^3 .
(02 Marks)



29. (a) A mother is twice as old as her son. In 5 years time their total age will be 70 years. How old is each now? (03 Marks)
- (b) Baagala had y tomatoes while Kalibbala had five times as many tomatoes as Baagala. They decided to put them together and divide into three equal heaps. If each heap had ten tomatoes, how many such tomatoes did each have to begin with? (03 Marks)
30. Suzan has a larger container of 300 litres. She sells passion fruit juice using a small container of 600ml at shs.500 each. How much will she get if she sells all the juice in the large container? (04 Marks)



31. The pie chart below shows the major expenditure of Mr. Kataka's income for a month in a year 2020.



- (a) Calculate the value of X. (02 Marks)
- (b) If he spends sh: 272,000 on masks, how much does Mr. Kataka earn? (02 Marks)

32. Town Q is 50km West of town P and town R is 40km from town P on a bearing of 150° .
- (i) Using the scale of 1cm = 10km, draw a rough sketch showing the three towns. (01 Mark)
- (ii) Draw an accurate diagram showing the three places. (03 Marks)
- (iii) What is the shortest distance from Q to R? (01 Mark)

