



TekArt Learning

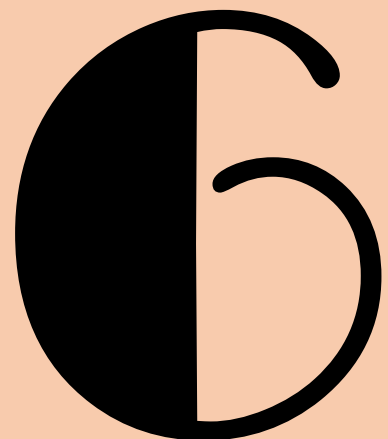
Vol
2

Mathematics

Revision Booklet

TekArt

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PAPER ONE

SECTION A: 40 MARKS

Questions 1 to 20 carry two marks each.

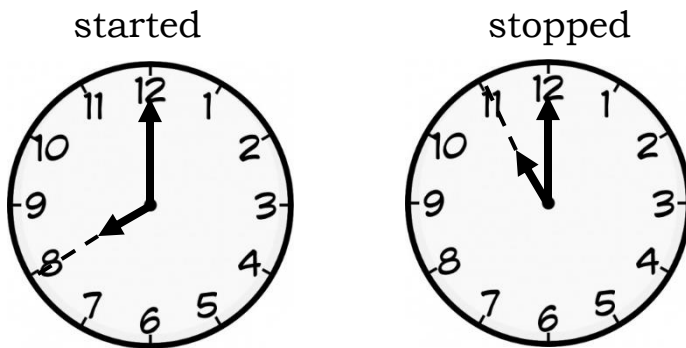
1. Subtract: 8 7 6

$$\begin{array}{r} 8\ 7\ 6 \\ -\ 1\ 0\ 6 \\ \hline \end{array}$$

2. Write 409,049 in words.

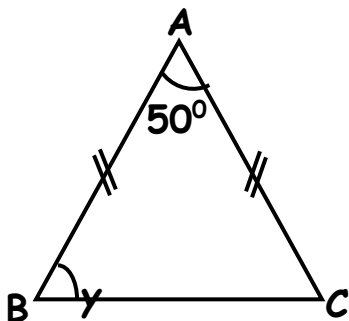
3. Change $501\frac{1}{6}$ to an improper fraction.

4. Joanita started driving her car in the morning and stopped at the time shown on the clock face below.



Find the time she took driving.

5. The area of a triangular garden is 60m^2 . If the base is 12m , find the height of the triangular garden.
6. Given that $\mathbf{P} = \{\text{Vowel letters}\}$. Find the number of subsets that can be formed from set $\mathbf{P}$.
7. A farmer has 635 goats, 948 cows and 215 sheep. Find the range of the animals on the farm.
8. Subtract: 102_{five} from 242_{five} , and give your answer in base ten.
9. Find the value of angle marked y .



10. A tray of 30 eggs costs sh.9000. How many eggs can one buy with Sh.155,100 ?

11. Use a number line below to multiply;

$$3 \times 2 =$$



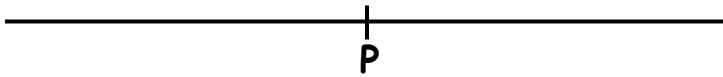
12. Solve: $3k - 2 = 142$

13. Peter had three silos of 124016kg , 31419kg and 214602 kg of beans.
How many kgs of beans did Peter have in his silos?

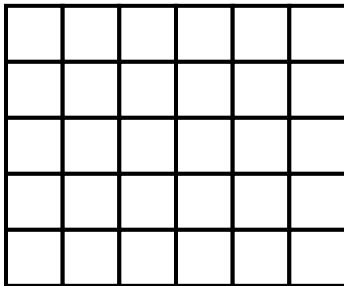
14. Find the smallest number of mangoes that can be shared between 12 girls and 15 boys and leaves no remainder.

15. The distance between Mukono Town and Seeta is 15km and it takes Enoch 45minutes to cover the above distance. At what speed in km/hr does he cover the distance?

16. Using a pair of compasses, a ruler and a sharp pencil, construct an angle of 120° at point **P**.



17. Shade 20% of the diagram below.



18. Round off 389 to the nearest hundreds.

19. Find the average of 60, 40 and 200.

20. Find the next number in the sequence.

1 , 3 , 6 , 11 , 18 , _____

SECTION B: (60 marks)

21. A father had money in his pocket as follows.

Two notes of fifty thousand shillings.

Five notes of five thousand shillings.

Ten coins of five hundred shillings.

(a) How much money did he have in his pocket altogether?

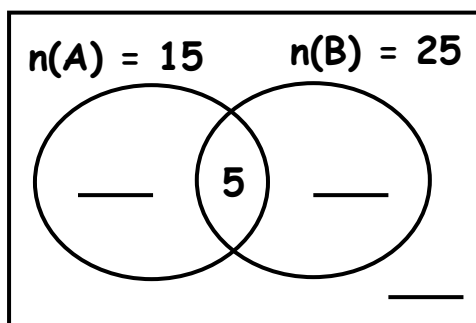
(2 marks)

(b) If he bought a watch from the nearby shop at sh.56,500, how much money did he remain with?

(3 marks)

22. Given that $n(A) = 15$, $n(B) = 25$, $n(A \cap B) = 5$ and $n(A \cup B)' = x$.

(a) Use the above information to complete the venn diagram below.



(3 marks)

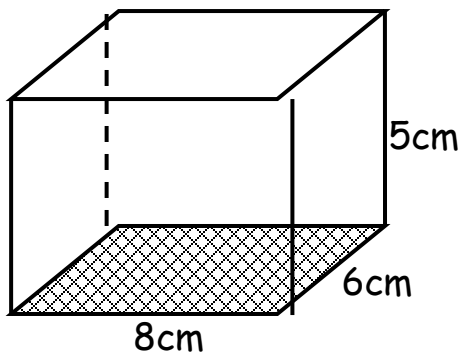
- (b) If $n(\Sigma) = 55$. Find the value of **X**. **(2 marks)**

23. Work out:

(a) $\frac{1}{2} - \frac{3}{4} + \frac{5}{6}$ **(2 marks)**

(b) $\frac{1.2 \times 0.09}{0.4}$ **(2 marks)**

24. **Study the cuboid below and answer questions that follow.**

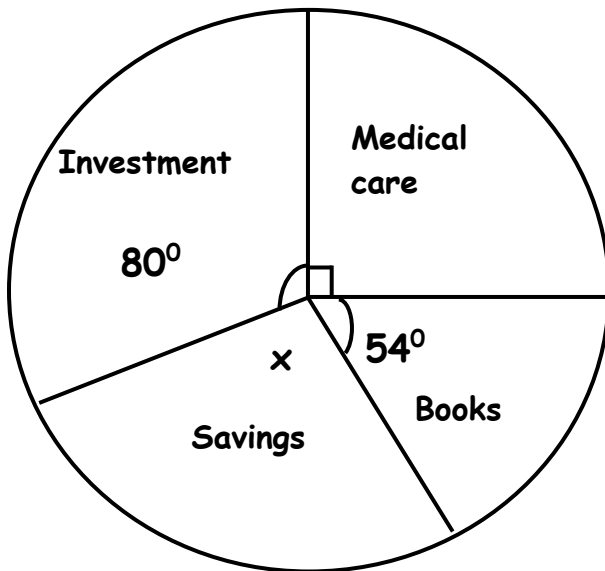


- (a) Find the perimeter of the shaded part. **(2 marks)**

(b) Find the total surface area of the cuboid above. **(3 marks)**

25. The sum of 4 consecutive integers is 46. Find the numbers.
(5 marks)

26. The pie-chart below shows how a man spends sh.360,000. Use it to answer questions that follow.



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

(b) Express the sector for medical care as a percentage.

(2 marks)

(c) How much more money does he spend on investment than books?

(2 marks)

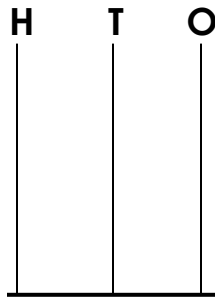
27. (a) With the help of a ruler, a sharp pencil and a pair of compasses only construct a rectangle **ABCD** where **AB = 7cm** and **BC = 5cm**.

(4 marks)

(b) Measure the diagonal **AC**.

(1 mark)

28. Represent “four hundred three” on the abacus below. **(1 mark)**



(b) What number has been expanded to give? **(2 marks)**

$$(5 \times 10^1) + (8 \times 10^0) + (3 \times 10^{-1})$$

(d) Write the number expanded in 28(b) above in words.

(2 marks)

29. Work out correctly.

(a) Metres Centimetres **(2 marks)**

49	65
+ 30	55

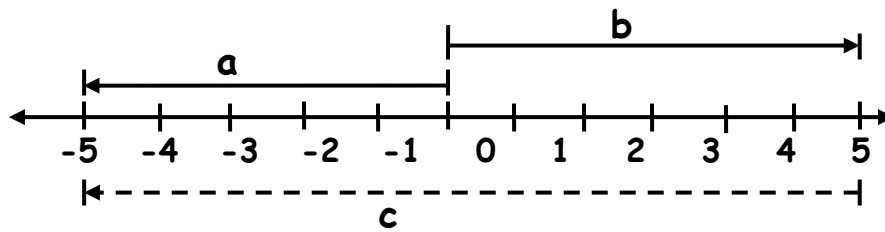
(b) Hours minutes **(2 marks)**

15	05
- 30	55

(c) How many 200gm packets of salt can be got from a 3.2kg of salt?

(2 marks)

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



- (i) Write the integers represented by the arrows. **(1 mark @)**

$c =$ _____ $b =$ _____

- (ii) Write the subtraction statement for the arrows shown above.

(3 marks)

31. A father shared one million among his three sons, Peter, Mark and Solomon in the ratio of 1 : 4 : 5 respectively.

- (a) How much did Mark and Solomon get altogether? **(3 marks)**

- (b) How much money did Mark get than Peter? **(2 marks)**

32. A parent bought three juice bags at different costs.



Shs. K



Shs. K - 600



Shs. 2K

- (a) Write an algebraic expression for the total cost of the bags.

(2 marks)

- (b) If the value of K is Shs. 1650. Find the total cost of the three bags.

(2 marks)

PAPER TWO

SECTION A (40 marks)

1. Work out: $32 + 24$

2. Write 97 in Roman numerals.

3. Given that $P = \{2, 3, 5, 6, 7\}$ and $Q = \{0, 2, 4, 6, 8\}$. Find $n(P \cup Q)$.

4. Express $\frac{3}{4}$ as a percentage.

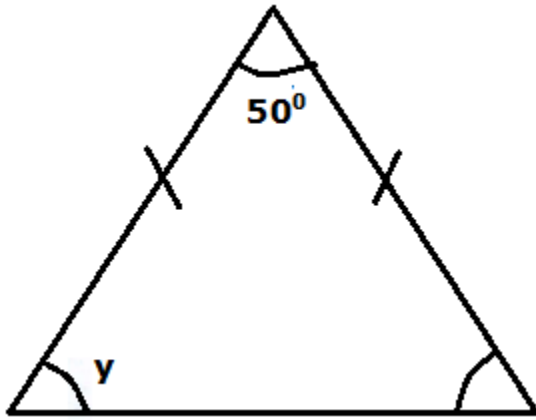
5. Simplify: $4n + m + n - 3m$

6. Find the next number in the sequence: 28 , 26 , 23 , 19 , _____.

7. Using a pair of compasses, a pencil and a ruler only, construct an angle of 45° in the space below.
8. Work out: $0.12 \div 0.06$
9. Simplify: $^{-}9 - ^{-}3$
10. A football match which lasted for 1 hour 45 minutes ended at 5:35p.m. When did the match start?

11. Solve: $1\frac{1}{2}n = 12$
12. Find the median of the following numbers: 30 , 60 , 10 , 80 , 50 , 70
13. The distance from the dining hall to the staff room is $\frac{1}{8}$ km. What is this distance in metres?
14. In a class of 48 pupils, the ratio of boys to girls is 5:3. Find the number of boys in the class.
15. Musa walked 9km in $1\frac{1}{2}$ hours. What was his average speed?

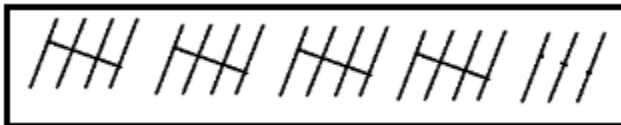
16. In the triangle below, find the size of angle **y** in degrees.



17. Solve: $3^{2n} \times 3^n = 3^6$

18. Find the square root of $6 \frac{1}{4}$.

19. The tallies below represent the number of pupils present in a P.6 class of 30 pupils. Find the number of pupils absent.



20. Elizabeth bought 20 shirts at sh. 150,000. She later sold the shirts at sh. 9,000 each. What was her profit?

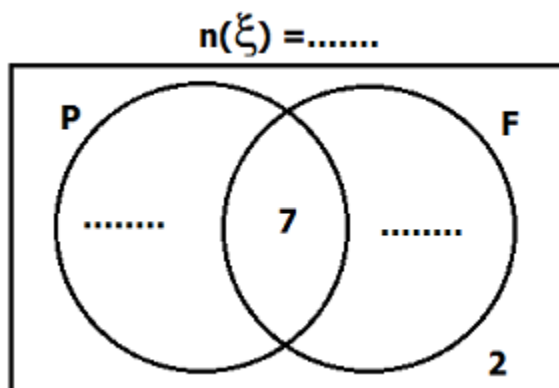
Section B (60 marks)

21(a) Work out: $1101_{\text{two}} \times 11_{\text{two}}$

(2 marks)

- (b) Find the difference between the values of 8 and 3 in the number 8, 435. **(3 marks)**

22. At a birthday party attended by 50 guests, 18 were served with Pepsi (P) only, 18 were served with Fanta (F) only, 7 were served with both Pepsi and Fanta while 2 guests were not served with any of the two types of soda.



(a) Use the information given above to complete the Venn diagram above. (3 marks)

(b) Find the value of k (2 marks)

(c) How many guests did not drink Pepsi at all? (1 mark)

23. Mapesa bought the following items from a market:

3 bars of soap at sh. 3,500 per bar

2 loaves of bread at sh. 3,800 per loaf

500g of tea leaves at sh. 5,000 per kg

1 $\frac{1}{4}$ kg of meat at sh. 8,000 per kg

How much money did he spend altogether?

(5 marks)

24(a) Simplify: $2\frac{1}{2} \div 7\frac{1}{2} \times 3\frac{1}{3}$

(3 marks)

(b) A man spends $\frac{3}{5}$ of his salary per month and saves sh. 240,000. What is his salary?
(3 marks)

25(a). Using a ruler, a pencil and a pair of compasses only, construct a triangle PQR in which $QR = 7\text{cm}$, $PQ = 5\text{cm}$ and $\angle PQR = 60^\circ$.
(4 marks)

(b) Measure the length of PR.

(1 mark)

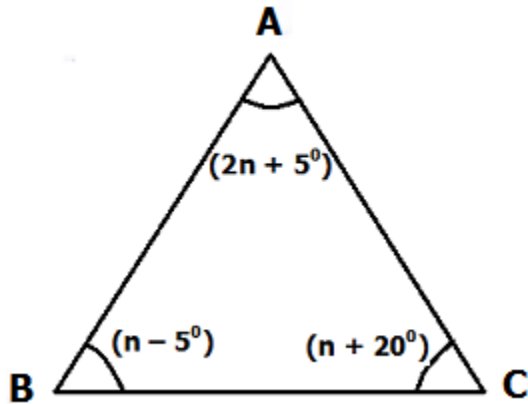
26(a) Given that $a = 3$, $b = 6$ and $c = -2$, find the value of $\frac{4a - 3c}{b}$

(2 marks)

(b) Solve: $c + \frac{c + 2}{3} = 6$

(3 marks)

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



(a) Find the value of n .

(3 marks)

(b) Calculate the size of angle BAC.

(1 mark)

28. A train travelled 240km from station **K** to station **M** in 3 hours.
It then travelled 320km from station **M** to station **N** at an average speed of 64km per hour.

(a) How long did the train take to travel from station **M** to station **N**. **(2 marks)**

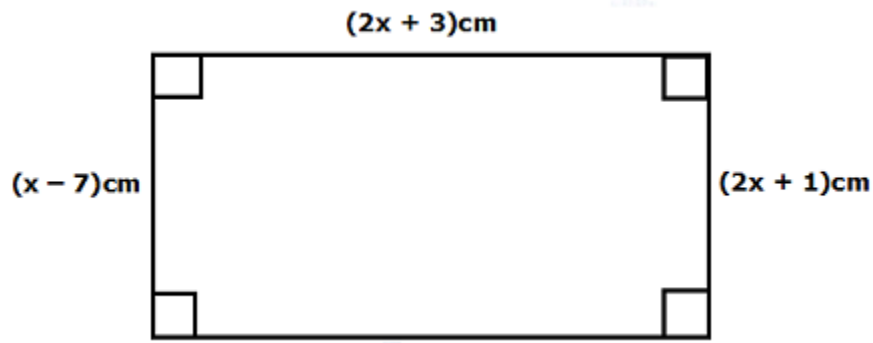
(b) What was the average speed of the train for the whole journey? **(3 marks)**

29. Two bells are used in Buna Primary School. One bell rings after every 30 minutes and another bell rings after every 40 minutes. If the two bells start ringing at 8:30a.m., at what time will they ring together again? **(4 marks)**

30(a) Express 108 as a product of prime factors. **(2 marks)**

(b) Work out: $(75 \times 66) + (75 \times 34)$ **(2 marks)**

31. The figure below is a rectangle.



- (a) Find the value of x . **(2 marks)**

- (b) Work out the perimeter of the rectangle above. **(3 marks)**

32. The table below shows the marks scored by P.6 pupils in a Mathematics test. Study it carefully and use it to answer the questions that follow.

Marks scored	55	57	65	78	80	90
Number of pupils	3	4	2	5	2	3

- (a) How many pupils did the test? **(1 mark)**

- (b) Find the range of the marks. **(1 mark)**

- (c) Work out the mean mark of the pupils who scored above 65. **(3 marks)**

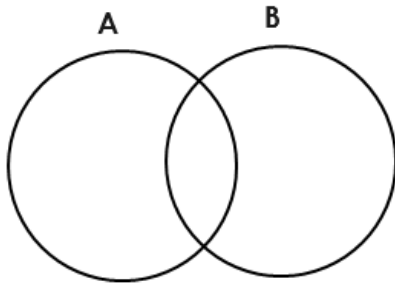
PAPER THREE

SECTION A

1. Subtract 12 from 18

2. Write 19 in words

3. Shade set B



4. There are 6 red pens and 4 blue ones in a bag. What is the probability of picking a blue pen at random from the bag?

5. Find the square root of 4

6. Convert 0.25 km to meters.

7. Write the next number in the sequence.
1, 4, 9, 16, 25, _____

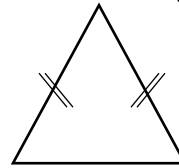
8. Simplify $^{-}4 - ^{-}6$

9. A lesson ended at 10:30a.m. If it lasted for 40 minutes, at what time did it begin?

10. Construct an angle of 60° using a pair of compasses and a ruler.

11. In a class of 49 pupils, $\frac{3}{7}$ are boys.
Find the number of girls.

12. Name this figure.



13. Subtract: Weeks Days
 5 3
— 2 6
—————
—————

14. The cost price of three books is sh.1800. Find the cost price of $\frac{3}{4}$ dozen of books.

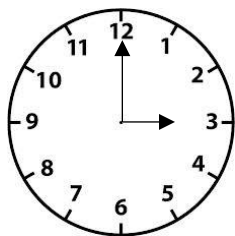
15. If $a = 4$, and $b = 6$, find $(ab)^2$

16. Write the place value of 4 in 62.14

17. Add:
$$\begin{array}{r} 234_{\text{five}} \\ + 122_{\text{five}} \\ \hline \end{array}$$

18. Round off 29665 to the nearest thousands.

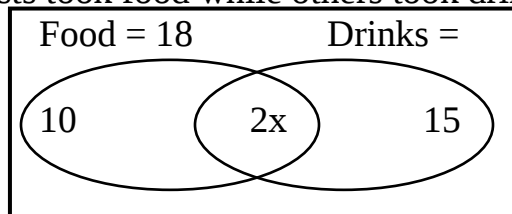
19. Write the afternoon time shown on clock face below.



20. Find the sum of the first six multiples of 10.

SECTION B

21. The Venn diagram below shows the number of guests who attended a party. Some guests took food while others took drinks.



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

(b) How many guests took drinks? (1 mark)

(c) How many guests attended the party? (2 marks)

22. The sum of three consecutive numbers is 27

(a) Find the numbers. (3 marks)

(b) Calculate their product (1 mark)

23. (a) In Kumi district there are 3816 students. If there 47967 students are in Kitgum, how many students are there altogether in the two districts. (3 marks)

(b) Divide 1515 by 5 (2 marks)

24. Mr. Musoke divided 250 hectares of land amongst his three children: John, Joseph and Joel in the ratio 2:3:5 respectively.

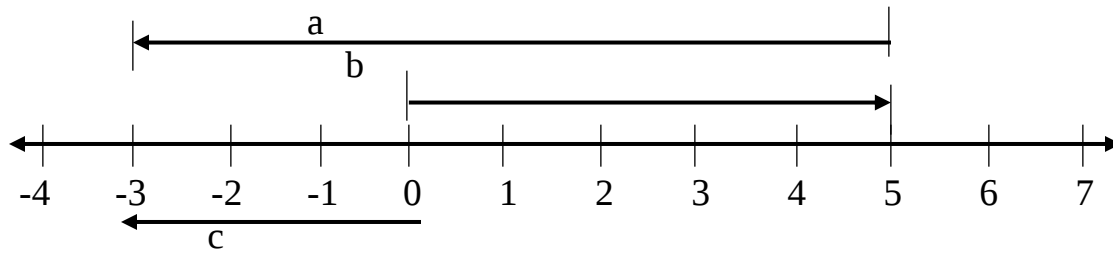
(a) How many hectares of land did each get? (4 marks)

(b) How many hectares of land did John and Joel get? (1 mark)

25. The bell for infant school is sounded every 30 minutes and for upper school is sounded after 40 minutes. If the two bells are sounded together at 8:00a.m. When will they next be sounded together? (5 marks)

26. The following marks were obtained by 5 pupils in a Math test
90, 50, 40, 70 and 80
- (a) Find the modal frequency (2 marks)
- (b) What is the median mark? (2 marks)
- (c) Calculate the arithmetic mean (2 marks)
27. A cuboid measures 5cm by 4 cm by 3cm
- (a) What is its volume? (2 marks)
- (b) Calculate its total surface area. (3 marks)

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

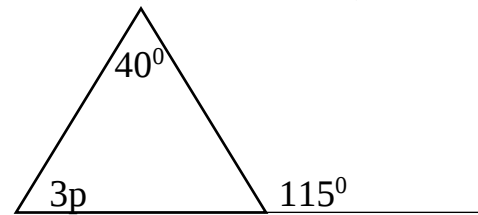
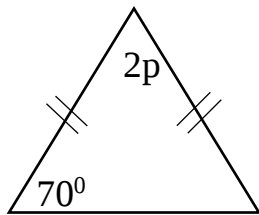


(a) Name the integers represented by letters

(i) $a = \underline{\hspace{2cm}}$ (ii) $C = \underline{\hspace{2cm}}$ (iii) $b = \underline{\hspace{2cm}}$ (1 mark each)

(b) Write a mathematical sentence for the above number line. (2 marks)

29. Find the value of P in each of the following diagrams (2 marks each)



30. Solve the algebraic equations

(a) $\frac{2K}{4} = 20$

(b) $6k - k = 50$ (2 marks each)

(c) $M - 4m + 6m = 18$

31. Using a ruler, a sharp pencil and a pair of compasses only, construct a square of sides 5cm.

32. (a) Simplify: $\frac{1.4 \times 0.6}{0.7}$ (3 marks)

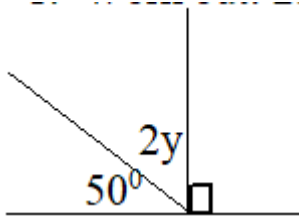
(c) Divide $4 \div \frac{1}{4}$

PAPER FOUR

SECTION A

1. Work out: $6 \times 7 =$
2. Set P has 16 subsets, find its number of elements.
3. Write the place value of 4 in 23.14
4. Write 444 in words.

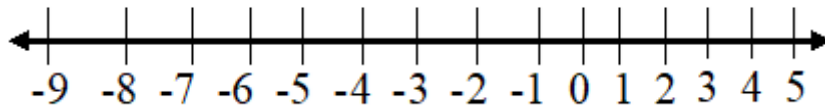
5. Find the value of Y in degrees.



6. Work out: $25 \times 18 \div 6$

7. Find the square root of $\frac{16}{64}$

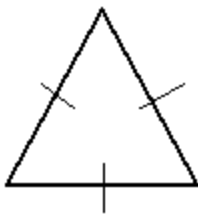
8. Show -7 on the number line below.



9. Mary deposited sh. 200,000 in the bank at a simple interest rate of 5% per annum. How much interest did she earn after 9 months?

10. Peter was given a bundle of one thousand shillings notes numbers from OT447500 to OT447699 consecutively. How much money did Peter get?

11. How many lines of folding symmetry has the figure below?

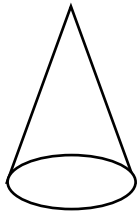


12. Express 0.05 as a simplified fraction

13. There are 30 eggs on the tray. How many trays eggs will be required to pack 330 eggs?

14. Increase sh. 12,000 in the ratio 7:4

15. Name the pyramid below.



16. A bus started its journey to Mbale at 9:00a.m and reached its destination at 2:00p.m.
How long did the journey take?

17. Write the next two numbers in the series 1, 4, 9, 16, 25, _____, _____

18. 20 pupils can sing the national anthem in 5 minutes. How long do 15 pupils take to sing the same song?

19. Represent 18 in tally form

20. Convert $\frac{1}{4}$ to degrees.

SECTION B

21. The table below shows the marks obtained by students in a Mathematics contest.

No of students	3	2	5
Marks obtained	50	90	80

(a) Find the median score (2marks)

(b) Calculate the mean mark (3marks)

22. (a) Subtract 0.24 from 2.01 (2marks)

(b) Simplify: $\frac{0.42 \times 2.4}{0.7 \times 0.6}$ (3marks)

23. Joshua had sh. 30,000 and bought the following items.

2 loaves of bread at sh. 2500

2 ½ kg of soya flour at sh 6,000 per kg

500gm of sugar at sh, 2000 per kg

2 kg of rice at sh. 4000

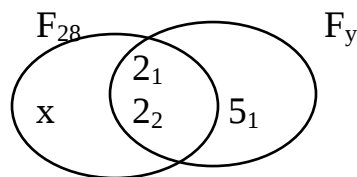
(a) Calculate Joshua's bill

(4 marks)

(b) What was his balance?

(1 mark)

24. The Venn diagram below shows the prime factorization of F₂₈ and F_Y. Use it to answer questions that follow.



(a) Find the value of x.

(2 marks)

(b) Find the value of y

(1 mark)

(c) Find the GCF of F_Y and F₂₈

(1mark)

(d) Calculate the LCM of F_{28} and F_y (2 marks)

25. In a choir of 120 people, 60% are females and the rest are males.

(a) What is the percentage of males in the choir? (2marks)

(b) How many females are in the choir? (2 marks)

(c) What is the ratio of males to the total number of people in the choir?

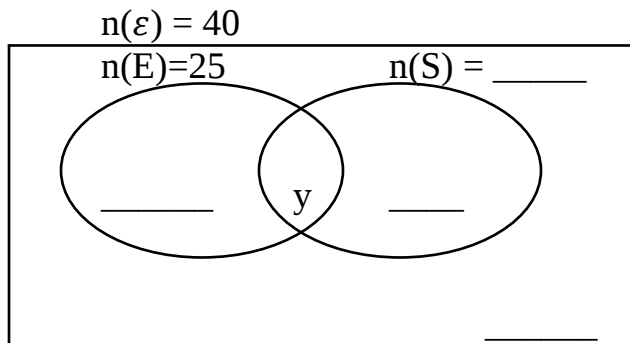
26. Using digits 3, 8 and 0

(a) Form the smallest 3 digit numerals (1 mark)

(b) Form the largest 3 digit numerals (1mark)

- (c) Find the probability of picking an even number after forming all 3 digit numerals.
(2 marks)

27. In a class of 40 pupils, 25 like English (E) 15 like Science (S), y pupils like both English and Science and 8 do not like any of the two subjects



(a) Complete the Venn diagram. (2mks)

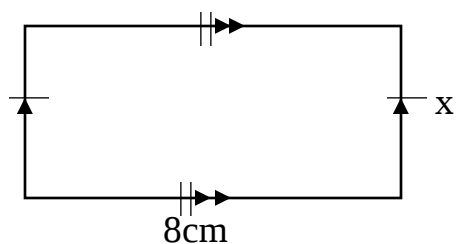
(b) Find the value of y . (2 marks)

(c) How many pupils like at least two subjects (1 mark)

28. (a) Write in short $(2 \times 10^2) + (2 \times 10^0) + (8 \times 10^{-3})$ (2 marks)

(b) A feeding family programme gives 4kg of flour for every adult and 3kg for each child. How much will be given to a family with 20 adults and 14 children?
(3 marks)

29. The perimeter of the rectangle below is 28 centimeters



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

(b) Find the area of the figure above. (2 marks)

30. (a) Solve: $4a + 2a + 5 = 23$ (2 marks)

(b) Larok multiplied a number by 4 and added 5 to it. His result was 25. What was the number? (2 marks)

31. Using a ruler, sharp pencil and a pair of compasses only, construct a regular triangle in
a circle of radius 4cm (4 marks)

32. The sum of three consecutive counting numbers is 66. If the least number is y . Find the
value of y (2 marks)

(b) Find the range of numbers (1 mark)

(c) Work out their average (2 marks)

PAPER FIVE

SECTION A:

1. Work out: $78 - 13$

2. Simplify: $-2 + +6$

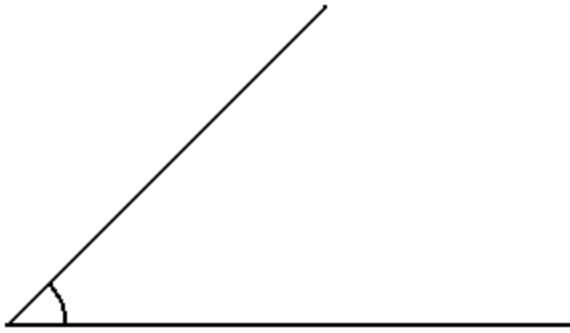
3. Write LIX in Hindu Arabic numerals.

4. Simplify: $\frac{1}{6} + \frac{3}{4}$

5. Simplify: $3x + 2y + x + y$

6. Find the next number in the sequence: 1, 3, 6, 10, 15, _____

7. Use a protractor and measure the angle drawn below.



8. Given that set $A = \{1, 2, 3, 4, 5, 6\}$ and set $B = \{2, 3, 5, 7, 11\}$. Find $n(B - A)$
9. A mathematics lesson started at 9:00am and took 50 minutes. At what time did the lesson end?
10. What number has been expanded to give $(3 \times 10^3) + (8 \times 10^1) + (6 \times 10^0)$
11. A trader bought a goat at shs. 63,000 and later sold at shs. 81,000. Calculate the profit the trader made.

12. Work out the average of 8, 7, 9, 6 and 5.

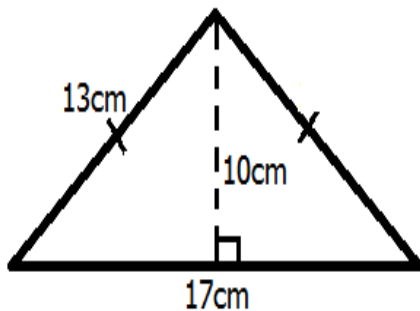
13. Express $\frac{24}{7}$ as a mixed number.

14. Work out:

	Weeks	days
	5	3
-	2	5

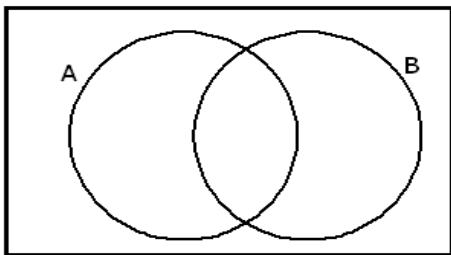
15. Write in figures: Four million, four thousand four.

16. Find the perimeter of the triangle below.



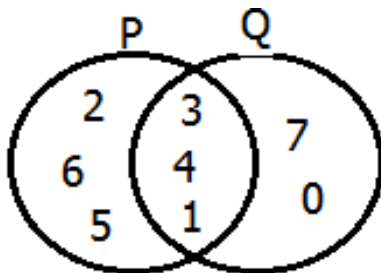
17. Prime factorise 36.

18. Wamboga covered a distance of 7 km. Express his distance in metres.
19. There are 32 shelves in the library. Each shelf contains 45 books. Find the total number of books in the library.
20. Shade $A \cup B$ in the Venn diagram below.



Section B

21. Use the Venn diagram below and answer the questions that follow.



- (a) List members of set Q. **(1 mark)**
- (b) Find $n(P \cup Q)$. **(2 marks)**

(c) Find P – Q

(1 mark)

22. Below is a shopping list showing items bought by Mrs. Komuntu. Use it to answer questions that follow.

ITEM	UNIT COST	AMOUNT
2kg of sugar	Shs. 2500 per kg	Shs. _____
3 bars of soap	Shs. ____ per bar	Shs. 12,000
____ litres of milk	Shs. 1200 per litre	Shs. 1800
Total Expenditure		Shs. _____

(a) Complete the table above.

(4 marks)

(b) If she went with Shs. 30,000, how much money did she remain with? **(2 marks)**

23. Given the number 74853.

(a) What is the place value of 8? **(2 marks)**

(b) Work out the difference between the values of 5 and 7. **(3 marks)**

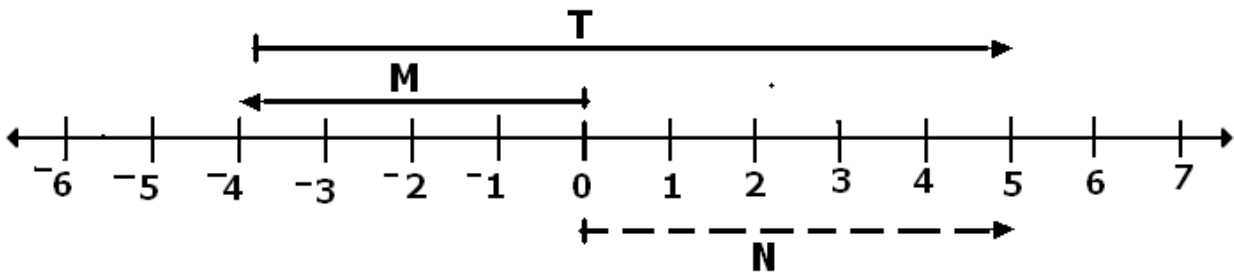
24. $\frac{2}{3}$ of the seats in the bus is occupied by adults and $\frac{1}{4}$ of the seats is occupied by children.

(a) What fraction of the seats in the bus is occupied? **(2 marks)**

(b) What fraction of the seats is unoccupied? **(2marks)**

(c) If there are 60 seats in the bus. How many children are in the bus? **(2 marks)**

25.



(a) Write down the integers represented by the arrows. **(1 mark each)**

(i) M _____ (ii) T _____ (iii) N _____

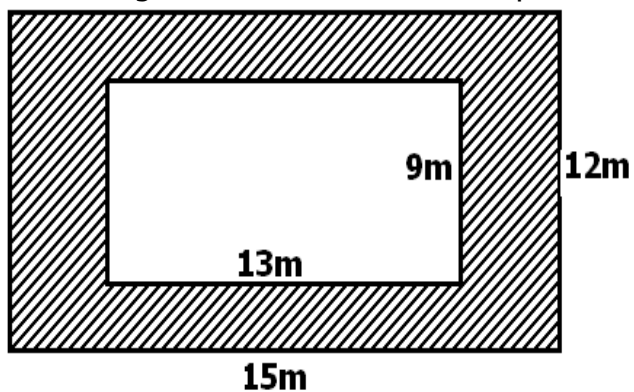
(b) Write down the mathematical statement illustrated above. **(1 mark)**

26(a) Given that $p = 6$, $q = 8$ and $r = 4$. **(2 marks each)**

(i) Evaluate $\frac{pr}{q}$ (ii) $(p + q) - r$

(b) Solve for x : $x + 7 = 15$ **(2 marks)**

27. Use the figure below to answer the questions that follow.



(a) (2 marks)

(b) What is the area of the small rectangle? (2 marks)

(c) Find the area of the shaded part. (2 marks)

28. The sum of four consecutive counting numbers is 70. What are the numbers? (5 marks)

29(a) There are 385,615 males in a town and 596,211 females. Find the population of the town. (2 marks)

(b) The district education officer shared 1,960 desks among 8 schools. How many desks did each school get? (2 marks)

30(a) A bus travelled from Mbale to Soroti at a speed of 45km/hr for 4 hours. Calculate the distance covered by the bus. (2 marks)

(b) If the bus was travelling at a speed of 60km/hr, how long would it take to cover the same journey? (2 marks)

31. Using a ruler, a pencil and a pair of compasses only, construct a triangle where $AB = BC = AC = 6\text{cm}$. (4 marks)

32. The graph below shows the number of bottles of soda drank by 4 pupils in a month.

Name	Number of bottles
Peter	
Jane	
Sharif	
Jauhara	

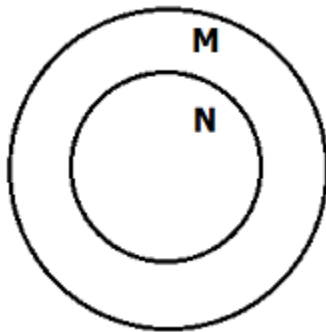
Given that  = 20 bottle:

- (a) How many bottles did Peter take? **(1 mark)**
- (b) Which pupils took the same number of bottles? **(2 marks)**
- (c) Who took a 100 bottles of soda? **(1 mark)**
- (d) Find the total number of bottles drank by the 4 pupils. **(2 marks)**

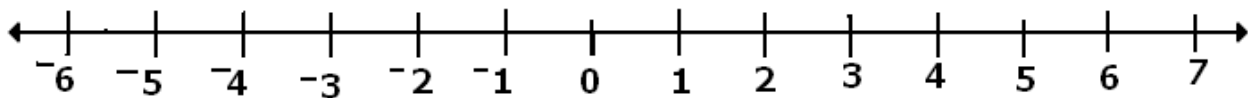
PAPER SIX

SECTION A: (40 marks)

1. Work out: $48 - 16$
2. Write 50406 in words.
3. Simplify: $5ab - 8 - 3ab + 5$
4. What is the relationship between set M and set N in the Venn diagram below?



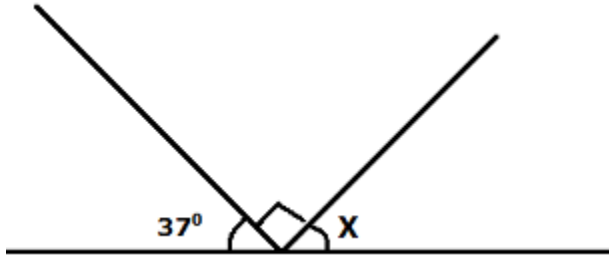
5. Show $-5 + +4$ on the number line below.



6. What is the range the following: $3, -4, 0, -7, 5$ and 6 ?
7. Change 45% into a fraction.
8. What is the square root of 256 ?
9. Convert $1 \frac{3}{5}$ kg to grams.
10. Using a ruler, a pencil and a pair of compasses only, construct an angle of 135° in the space below.

11. Round off 6997 to the nearest ten.

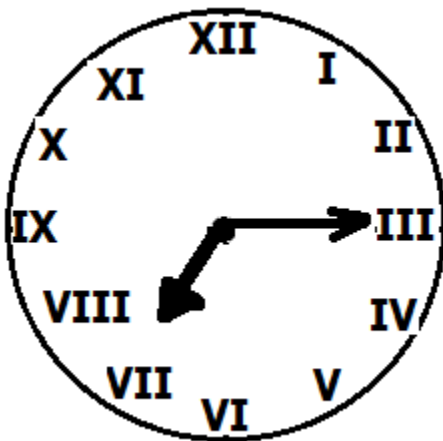
12. Work out angle x in the figure below.



13. By selling a watch at sh. 28000, a trader made a profit of sh. 3000. How much did he buy the watch?

14. Divide: 10266 by 29.

15. What evening time is shown on the clock face below?



16. Work out: $\frac{5}{6} + \frac{5}{8}$

17. If $a = 4$, $b = 3$ and $c = 0.4$, evaluate: $\frac{ab}{c}$

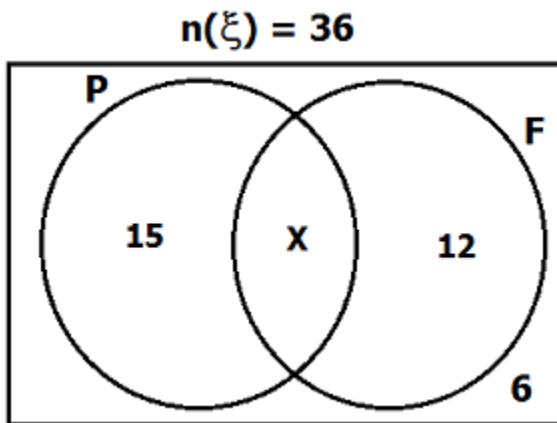
18. A mathematic lesson started at 9:50am and ended at 10:40am. How long was the lesson?

19. The perimeter of a square is 56m. What is the length of one side?

20. The LCM of two numbers is 36 and their GCF is 6. What is the second number if the first number is 12?

Section B

21. The Venn diagram below shows pupils in a class who eat Peas (P) and Fish (F). Use it to answer the questions that follow.



- (a) Find the number of pupils who like both types of sauce. **(2 marks)**

- (b) How many pupils eat peas? **(1 mark)**

(c) What fraction of pupils eat only one type of sauce? **(2 marks)**

22. Mrs. Mugisha went to the market and bought the following items:

2kg of meat at sh. 9500 per kg.

750gm of spices at sh. 8400 per kg.

2 loaves of bread at sh. 6400

1 $\frac{1}{2}$ kg of rice at sh. 3600 per kg.

(a) How much money did she spend altogether? **(5 marks)**

(b) She had two-twenty thousand shilling notes, find her change. **(1 mark)**

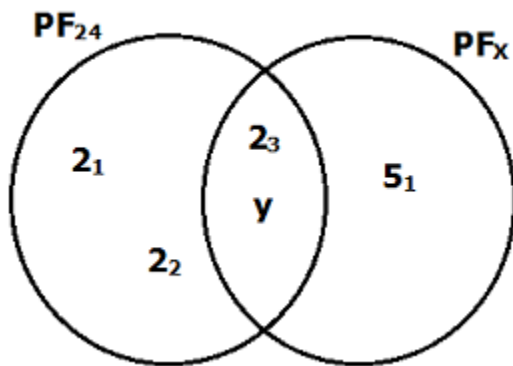
23(a) Using a ruler, a pencil and a pair of compasses only, construct a triangle ABC in which $AB = 7.5\text{cm}$, $BC = 7\text{cm}$ and angle $ABC = 90^\circ$.

(4 marks)

(b) Measure angle BAC.

(1 mark)

24. The Venn diagram below shows the prime factorization of 24 and x.



(a) What is the value of:

(1 mark each)

(i) y

(ii) x

(b) Use the Venn diagram to calculate the LCM of 24 and x. **(2 marks)**

25(a) Simplify: $2\frac{2}{3} \div 3\frac{1}{5} - \frac{3}{4}$ **(3 marks)**

(b) Work out: $3.8 - 5.65 + 3.9$ **(2 marks)**

26. The table below shows ages of children in a dormitory. The average age is 7 years.

Age in years	4	5	P	9	10
Number of children	2	6	7	4	1

(a) How many children are in the dormitory? **(2 marks)**

(b) Work out the value of p. **(3 marks)**

(c) What is the modal age? **(1 mark)**

27. In a refugee camp, there are 48 families. 23 of the families were given 65kg of rice each and the rest of the families were given 72kg of rice each. How many Kg of rice were distributed altogether? **(5 marks)**

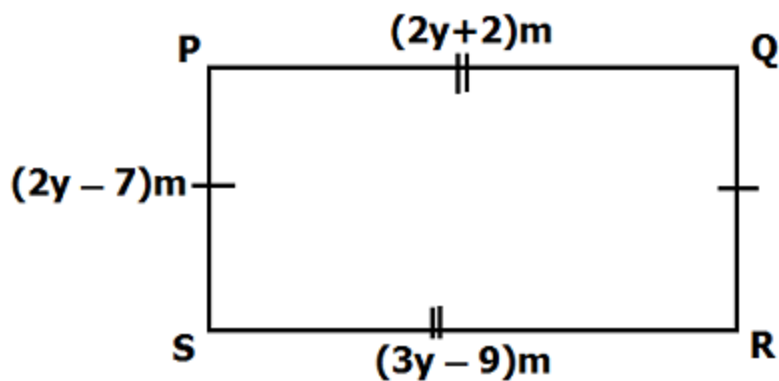
28. Mr. Kagingo left Kampala driving at 72km per hour for Migyera where he arrived 2 $\frac{1}{2}$ hours later. He returned to Kampala from Migyera driving at 120km per hour.

(a) How far is Migyera from Kampala? **(2 marks)**

(b) Find the time taken when returning to Kampala. **(1 mark)**

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

29. The figure below is a rectangle PQRS.



(a) What is the value of y ? (2 marks)

(b) Calculate its area. (3 marks)

30(a) Solve: $\frac{2}{3}k + k = 10$ (3 marks)

(b). Solve the equation: $\frac{18}{n} - 4 = 5$ (2 marks)

31. $\frac{5}{9}$ of the students in a school are boys. If there are 800 girls in the school:

(a) find the total number of students in the school. **(3 marks)**

(b) how many boys are in the school? **(1 mark)**

32. **The graph below shows the number of pupils in P.6. Use it to answer questions about it.**

Stream	No. of pupils
P. 6 V	
P. 6 M	
P. 6 W	

KEY

 = 8 girls

 = 10 boys

(a) How many girls are in P.6.V? **(1 mark)**

(b) Find the number of pupils in P.6.W. **(2 marks)**

(c). Calculate the total number of pupils in P.6. **(2 marks)**

PAPER SEVEN

Section A

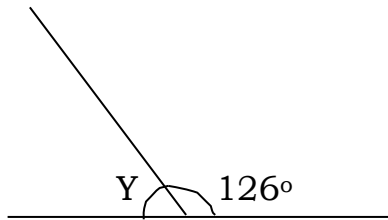
1. Add: $503 + 27$

2. Write CIX in Hindu Arabic numerals.

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

4. If set $P = \{\text{All factors of } 12\}$ Find $n(p)$

5. In the figure below, calculate the value of y in degrees.



6. A sack of maize with 3.5kg . Express this weight in grams.

7. Find the L.C.M of 12 and 18.

8. Change 1011two into base ten.

9. Write the next two numbers in sequence.

24, 26, 29, 31, 34, _____, _____.

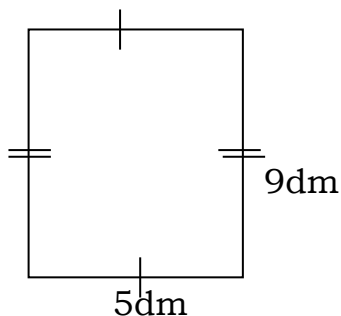
10 . Simplify $-8 - -5$

11 . Solve $3y + 2 = 11$

12. Draw an angle of 50° in the space below.

13. Prime factorise 18 in multiplication form.

14. Work out the perimeter of the rectangle below.



15. If $A = \{c, a, n, d, l, e\}$ and $B = \{u, n, c, l, e\}$
Find $n(A-B)$

16. Write 99049 in words.

17. Namuli ha 122 cows and some of them died. If 94 cows remained, how many cows died?

18. Use $<$, $>$, or $=$ to make the statement true.

$$XL + C \quad \underline{\hspace{2cm}} \quad CXX - XXX$$

19. 3 books cost shs. 1800. Find the cost of 7 similar books.

20. Work out:

Weeks	Days
9	3
- 3	5

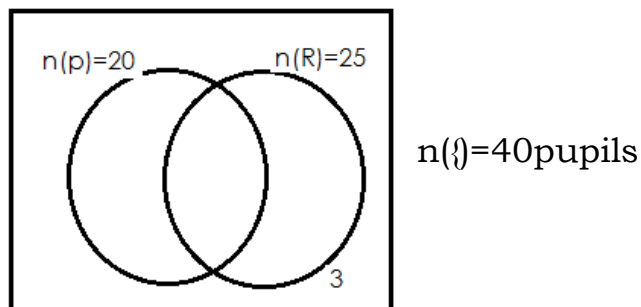
SECTION

21. (a) Simplify: $\frac{2}{3} - \frac{3}{4} + \frac{1}{2}$

(b) Work out $0.18 \div 0.9$

22. In a class of 40 pupils, 20 enjoy posho (p), 25 enjoy Rice (R), X enjoy both types of food and 3 enjoy other types of food.

(a) Complete the Venn diagram below.

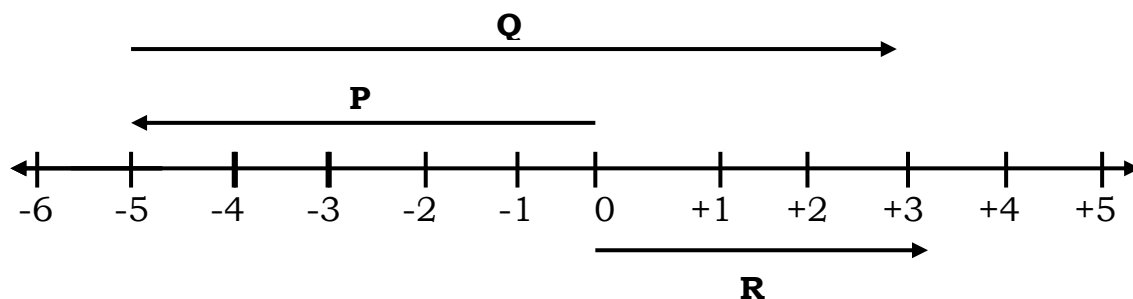


(b) How many pupils enjoy both types of food?

(b) Find the number of pupils who enjoy Both types of food?

(c) Find the number of pupils who enjoy only one type of food.

23. (a) Study the number line below and answer questions that follow it.



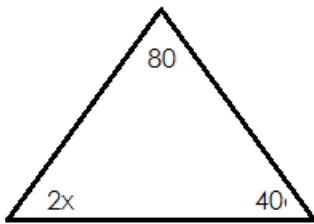
(a) Write down the integer represented by each letter.

(i) $R =$ _____ (ii) $P =$ _____ (iii) $Q =$ _____

(b) Write down the mathematical statement shown on the above number line.

24. (a) What is the supplement of 105° ?

(b) Calculate the value of x in the figure below:



25. Given the numeral 342.56.

(i) Write the numeral in words.

(ii) State the place value of 6 in that numeral.

(iii) Divide the value of 4 by the value of 5.

26. (a) Bridget bought a blouse for shs. 12000 which she later sold at shs.13500/=. Find her profit.

(b) If shs. 2000 can buy 4 pens, how much money will Nahurira pay for 7 similar pens?

27. Given that $a = 4$ and $b = 3$ find the value of:

(i) $a + b^2$

(ii) $\frac{a + b}{2b}$

(iii) $3b - 2a$.

28. Aber went shopping with 20,000/= and bought the following items.

2kg of sugar at shs 2400@

1½kg of rice at shs. 2200 per kilo.

4 bars of soap at shs. 1800 each bar.

(a) Calculate her bill.

(b) Find her balance after using 2000/= as transport.

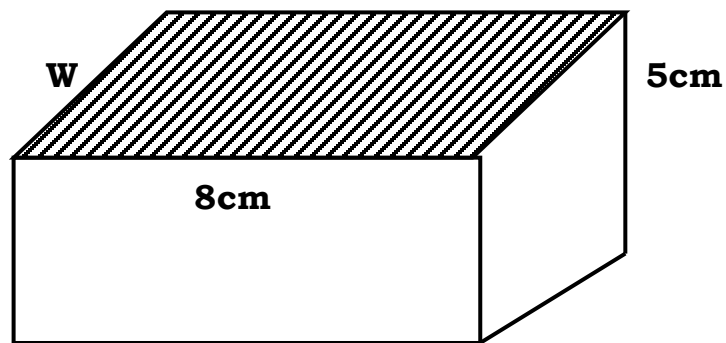
29. (a) Subtract $211_{\text{five}} - 44_{\text{five}}$

(b) Add: $1011_{\text{two}} + 111_{\text{two}}$

(c) What number has been expanded to give.

$$(2 \times 5^2) + (4 \times 5^1) + (1 \times 5^0)?$$

30. Study the solid shape below carefully and answer questions about it.



(a) Name the above drawn shape.

(b) If the area of the shaded part is 48cm^2 , find the value of W.

(c) Calculate the volume of the above solid shape.

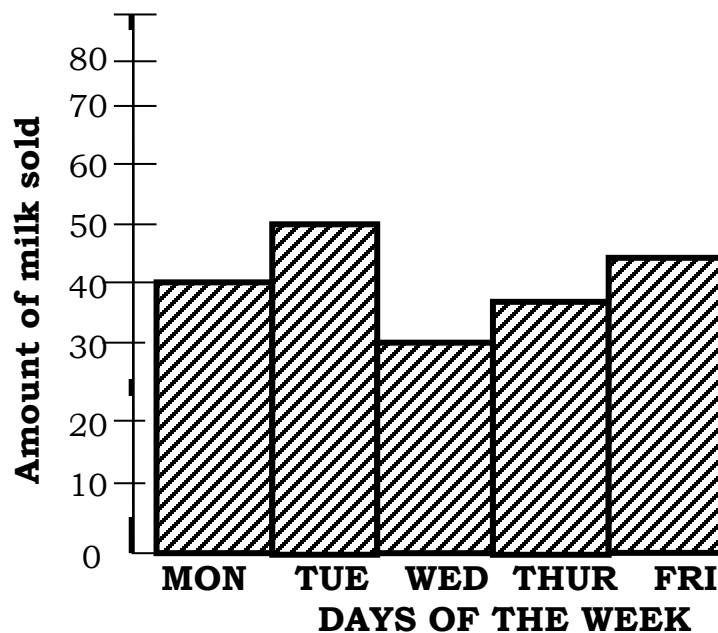
31. A cyclist covers a certain Journey in 4 hours riding at 60km 1hr

(a) What distance does he cover?

(b) How long does he take to cover 80km?

32. **The graph below shows the amount of milk Mr. Kamulegeya sells in 5 days.**

Answer questions about it.



(a) How much milk does he sell on Thursday?

(b) Find the difference between the highest and lowest amount of milk.

(c) How many litres of milk are least sold?

(d) Find the average amount of milk sold in the five days.

PAPER EIGHT

SECTION: A

1. Work out: $24 \div 2$

2. Express 59 in Roman numerals.

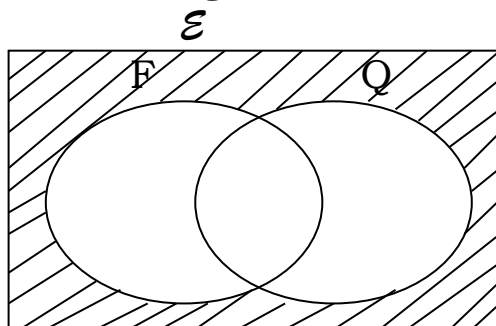
3. Convert $7\frac{1}{2}$ kgs to grams.

4. $P = \{ p , r , e , t , y \}$. How many subsets has set **P**?

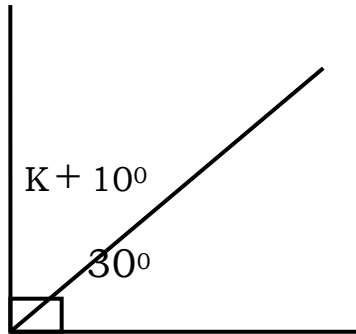
5. Find the next number in the sequence below:
1 , 3 , 6 , 10 , 15 ,



6. An examination started at 8:40 am and ended at 11:15 am. How long did it take?
7. Find the average of 40, 35, 60, 32, and 58.
8. John bought a radio at sh. 49,000 and later sold it at sh. 43,500. How much was the loss?
9. Solve for p in: $3p - 2 = 10$.
10. In the Venn diagram below, describe the shaded set region

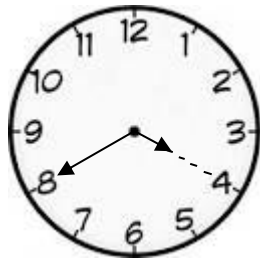


11. Calculate the size of angle **K** in the figure below



12. Simplify: $-5 + +6$.

13. What afternoon time is shown on the clock face below?

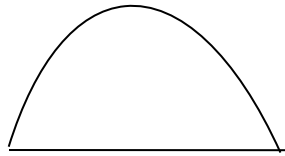


14. Find the sum of the 4th and the 7th Prime number.

15. The cost of 2 rulers is sh. 1,200. Find the cost of 5 similar rulers.

16. A cyclist moved at a speed of 60km/hr for $1\frac{1}{2}$ hrs. Calculate the distance covered by the cyclist.

17. How many lines of folding symmetry has the figure below?



18. Expand 7,635 using values.

19. In the figure below, find the perimeter.

20. Find the least number of sweet which when given to either 12 or 18 people leaves 7 as remainder.

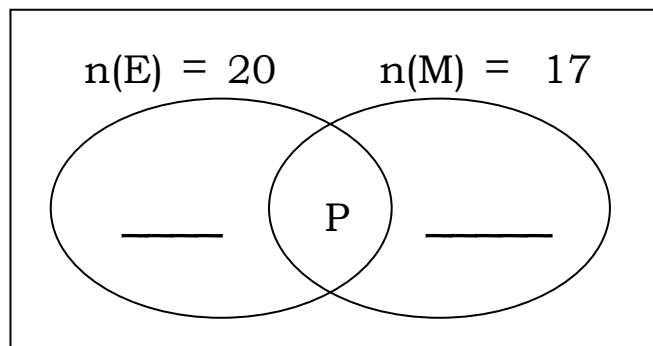
SECTION: B

21. In a class of 38 pupils, 20 like English(E), 17 like Mathematics (M) and P like both subjects.

(a) Complete the Venn diagram below.

(2 marks).

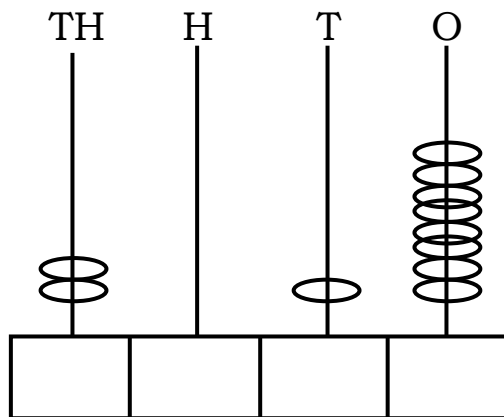
$$n(\mathcal{E}) = 38$$



(b) Find value of P.

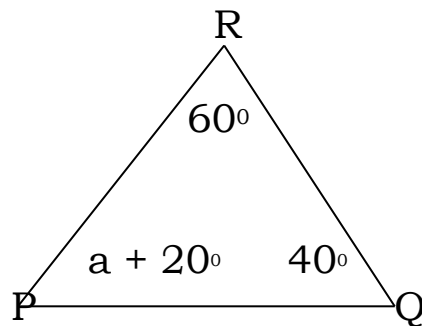
(3 marks)

22 (a) Write the numerals shown on the abacus in words. (2 marks)



(b) Work out the sum of the value of 2 and the value of 7 in the number 2,0764.

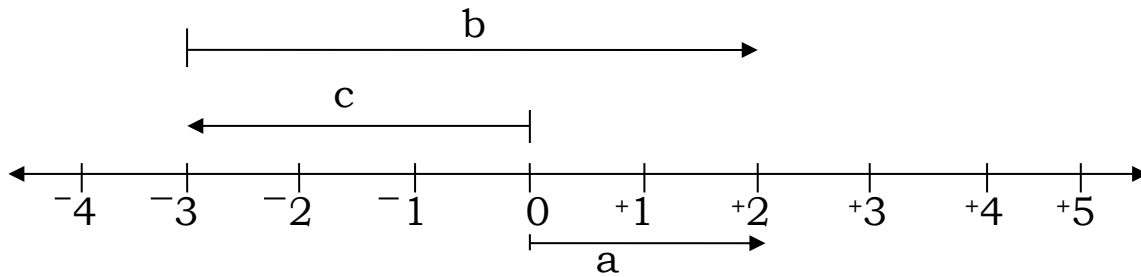
23 (a) In the figure below, find the value of a in degrees. (2marks)



(b) Work out the size of angle QPR.

(1mark)

24. Study the number line below carefully.



(a) Write the integers represented by arrows, (1 mark)

(i) a

(ii) b

(iii) c

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

25. Noeline bought the following items from the BAM shopping centre.

2 kgs of sugsr at shs 3,200 per kg.

$1\frac{1}{2}$ kgs of beans at shs 1,800 each.

3kgs of posho at shs 2,200 per kg.

500 gm of salt at sh. 1,200

(a) Calculate her total expenditure. (4 marks)

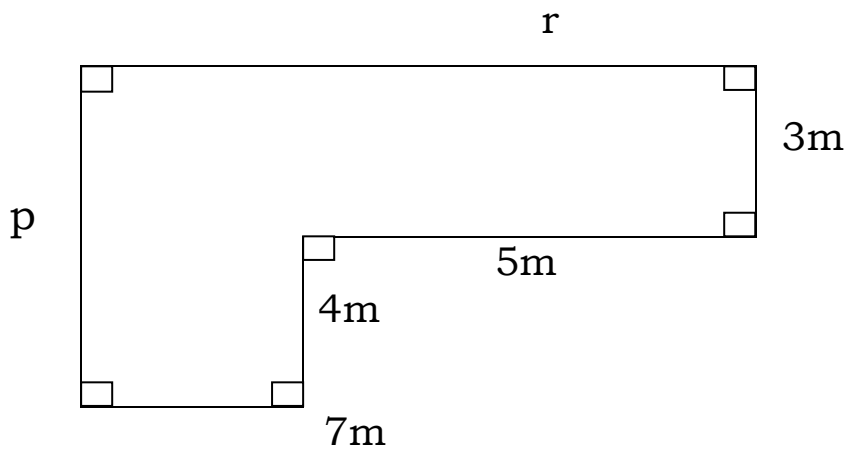
(b) If she had sh.20,000, calculate her change. (1 mark)

26 (i) Convert 134_{five} to base ten (2mark)

(ii) Work out:
$$\begin{array}{r} 233_{\text{five}} \\ + 424_{\text{five}} \\ \hline \end{array}$$

(iii) Add: $2 + 3 = \underline{\hspace{2cm}}$ (finite 5) (1 mark)

27. The figure below shows Mr. Kissa's house plan. Study it carefully.



a) Find the value of:

(i) p

(ii) r

(1 mark)

b) Work out the area of the above plan.

(3 marks).

28. The sum of 3 consecutive counting numbers is 120.

(a) Find the numbers.

(4 marks)

(b) Work out the product of the biggest and the smallest numbers above.

(1 mark)

29 (a) Mukasa drove his car steadily and covered 120 km in 3 hours. At what speed was he driving?
(2 marks)

- (b) If he started his journey at 8:30 am and reached his destination after $3\frac{1}{2}$ hours, what was his arrival time?
(3 marks)

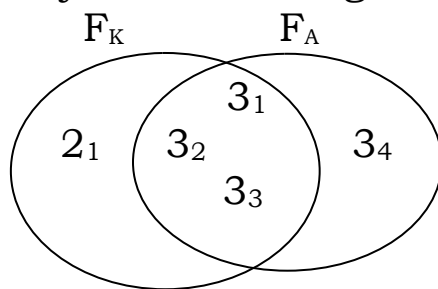
30. Given that: $k = 5$, $l = 4$ and $m = -2$.

- (a) Find the value of $2klm$ (2 marks).

- (b) Work out the value of $3k + 2m - 5l$. (2 marks)

- (c) Evaluate: $\frac{2klm}{5}$

31. Study the Venn diagram below carefully:

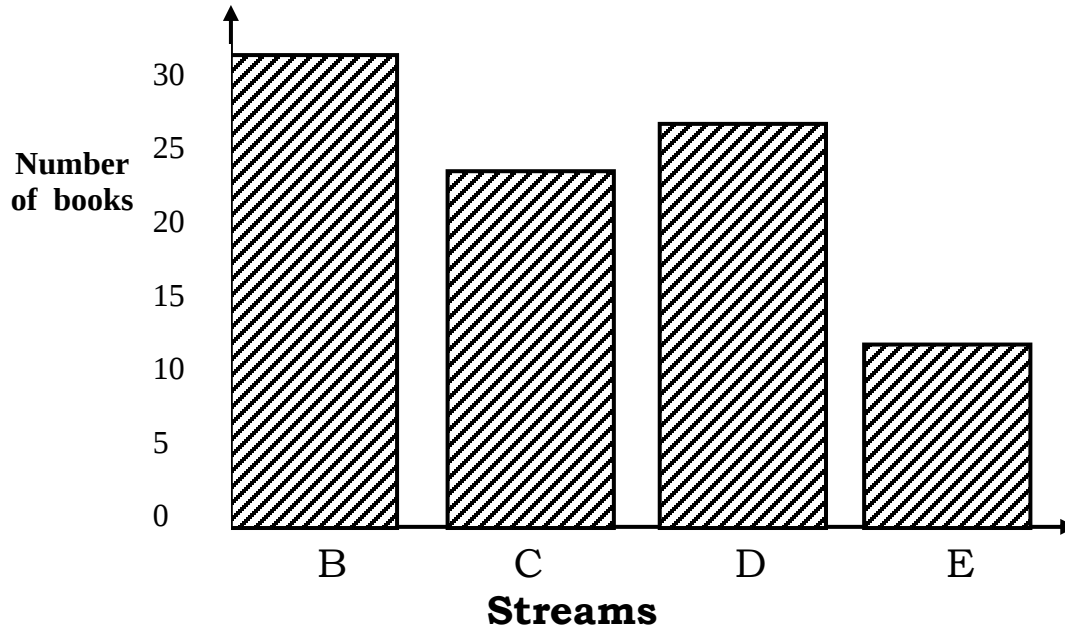


- (a) Find the value of A. (2 marks)

(b) Work out half the value of K and A. (1 marks)

(c) Calculate the LCM of K and A. (2 marks)

32. The bar graph below shows the number of books given to P.6.



(a) Which stream received the least number of books. (1marks)

(b) How many books did P.6 C get? (1 mark)

(c) How many more books did P.6 E get than P.6 D? (1mark)

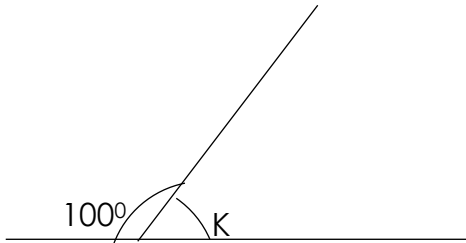
(d) Calculate the total number of books given out altogether. (2 marks)

PAPER NINE

SECTION A

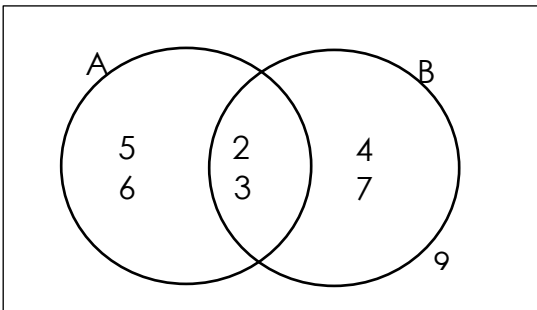
1. Workout; 3
 $\begin{array}{r} \times 0 \\ \hline \end{array}$

2. In the diagram below fin the value of K.



3. Convert 14_{five} to base ten.

4. Find $n(A \cup B)$ using the Venn diagram below.



5. Express 2:3 as a proper fraction.

6. Simplify; $-4 - -7$.

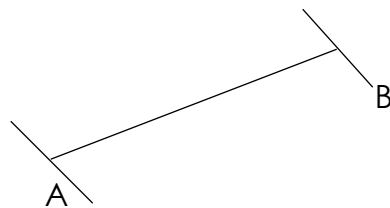
7. Find the next number in the sequence.

3, 7, 11, 15, _____.

8. Convert 7km to metres.

9. Given that $a = 4$, $b = 6$ and $c = 5$, find the value of $\frac{a+b}{c}$

10. Each of the twins had forty five books. How many books did they have altogether?



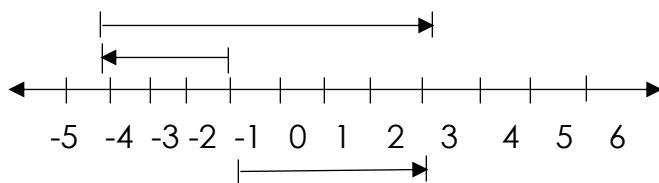
11. Express 1840 hours to 12 hours clock system.

12. Kato is twice the age of Nambi. If the difference in their age is 10, how old is Kato?

13. With the help of a ruler, pair of compasses and a pencil, construct a perpendicular bisector of line AB below.

14. A housewife bought 6kg 200gm of sugar on Monday and 4kg 600gm on Tuesday. How much sugar did she buy altogether on the two days?

15. The addition mathematical statement below is
 $-3 + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$



16. $A = \{0, 2, 4\}$ and
 $B = \{0, 1, 2, 3, 4, 5, 6\}$
Find $A - B$

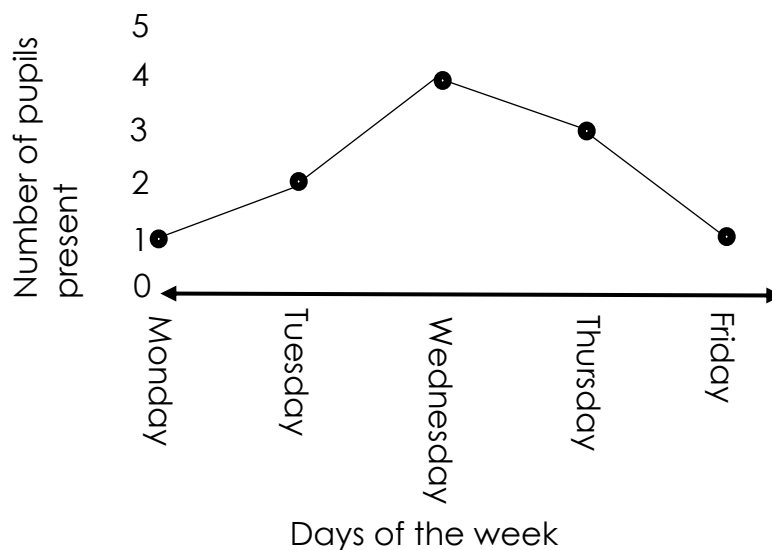
17. Given the figure 793 complete the table below

Digit	Place value	Value
9	_____	_____

18. Lunyolo withdrew 27,000/=. If she was given denomination of 1,000/= only, how many notes was she given?

19. Simplify; $\frac{2}{3} - \frac{1}{6} \times \frac{1}{6}$

20. The graph below shows the number of pupils who were absent from school in a week.



Find the total number of pupils absent the whole week.

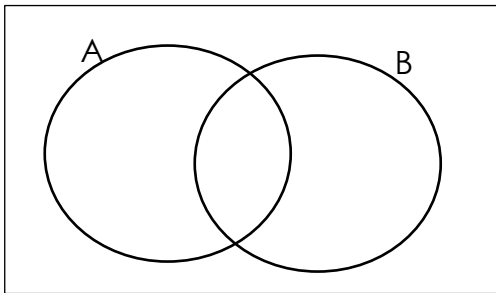
SECTION B (60 Marks)

21(a) Workout 704×7

(b) In a football league, a team played 38 matches. It lost 7 matches, drew 10 matches and won the rest. Given that 3 points are awarded for a match won, 1 point for a match drawn and no point for a match lost. How many pupils did the team get in the 38 matches?

22. Given that $n(A) = 12$, $n(B) = 20$, $n(A \cup B) = 25$ and $n(A \cap B) = x$;

(a) Represent the information on a Venn diagram.



23. In a clinic, 7 children had the following masses; 2kg, 19kg, 8kg, 5kg, 9kg, 8kg, 12kg. Find the;

(i) Modal mass

(ii) Median mass

(iii) Mean mass

(b) How many children had their masses below the mean mass?

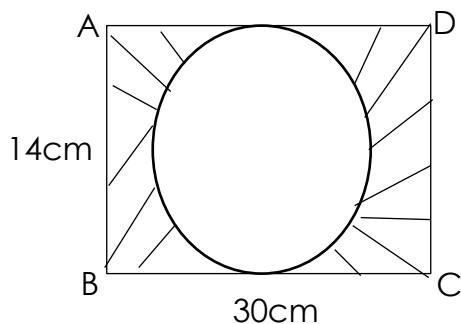
24(a) The sum of the three consecutive even numbers is 24. Find the actual numbers if the smallest is x .

(b) Find their range.

25(a) Three girls Jane, Suzan and Mary shared sweets in the ratio of 2:5:3 respectively. If Mary got 12 sweets, how many sweets did they share altogether?

(b) How many sweets did Jane get than Suzan?

26.



(a) Find the area of the rectangle ABCD.

(b) Taking π as $\frac{22}{7}$, find the area of the unshaded portion.

27(a) Solve $3(a + 2) + (2a - 1) = 29$

(b) Find the solution set for;
 $2y + 3 < 9$

28(a) Kabuye left place A from place B 60km apart on a bearing of 110° . He then headed to place C 55km away on a bearing of 070° . Draw a sketch showing the above places.

(b) Using the scale of 1 cm to represent 10km, draw an accurate diagram showing the above places.

(c) From the accurate diagram, find the true bearing of place A from place B.

29(a) A bus moved at a speed of 80km/hr for 2 hours from Kampala to Masaka. It then moved at a speed of 60km/hr for 3 hours from Masaka to Mbarara. Find the distance between Kampala and Masaka.

(b) Find its average speed for the whole journey.

30. Benita had a 10,000/= shilling note. She went to the market and bought the following items;

6 mangoes at 500/= for 3 mangoes

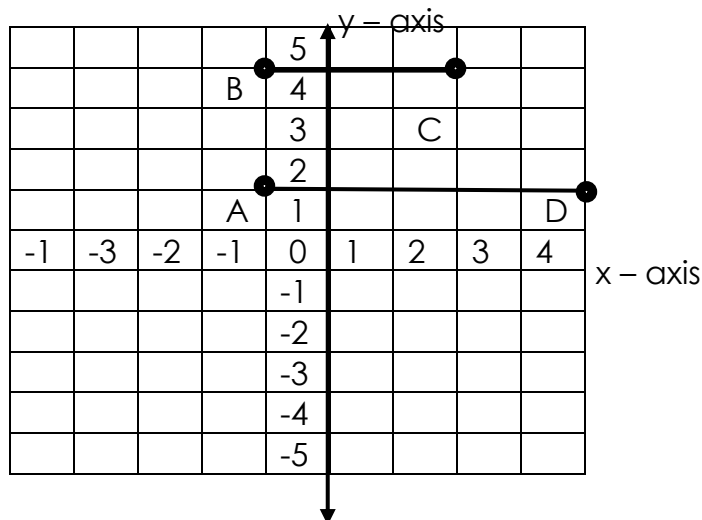
1 sugarcane at 500/=

2 loaves of bread at 3,300/= each

3 cakes at 300/= each

Find the change she received.

31. Study the graph below and answer the questions that follow.



(a) Name the co-ordinates of point

(i) A

(ii) B

(iii) C

(b) Join A to B, B to C, C to D and D to A. Name the figure formed.

(c) Find the area of the figure formed.

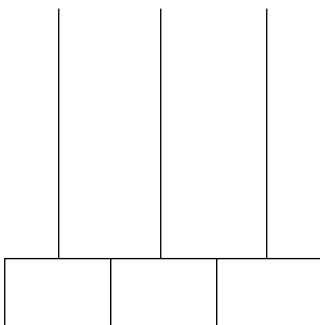
32(a) Work out; $\frac{0.12 \times 0.8}{0.4}$

(b) $\frac{2}{3}$ of a number is 20. Find $\frac{2}{5}$ of the same number.

PAPER TEN

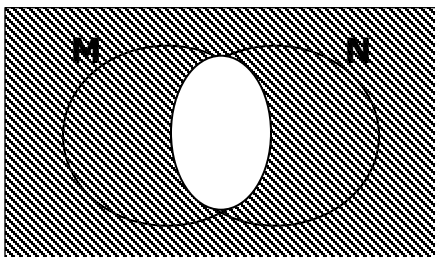
SECTION A

1. Subtract 290 from 500.
2. Given that set Y has 32 subsets, how many elements are in set Y?
3. Change 10110_{two} to a decimal base.
4. Expand 2403 using place values.
5. Represent 123_{four} on the abacus below.

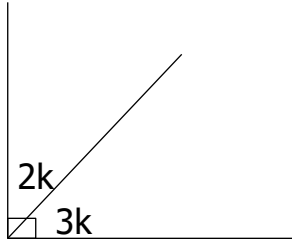


6. If $P = \{\text{prime numbers between 8 and 20}\}$. Find $n(P)$.

7. A bus carries 84 passengers each trip. How many people will it carry if it makes 18 trips?
8. Write in figures; Forty thousand, two.
9. Find the square of the sum of 2 and 3.
10. The LCM of two numbers is 144 and the H.C.F is 12. If one of the numbers is 36, find the other number.
11. Find the square root of 0.81.
12. Describe the shaded region on the Venn diagram below.



13. Calculate the value of k in degrees.



14. Workout; $3 \overline{)2121}$

15. Find the least number that leaves a remainder of 5 when divided by 8 or 12.

16. Draw a Venn diagram to show that all dogs are animals.

17. Using a pair of compasses, a ruler and a sharp pencil only, construct an angle of 45° .

18. Find the product of the next two numbers in the sequence below.
2, 3, 5, 7, _____, _____.

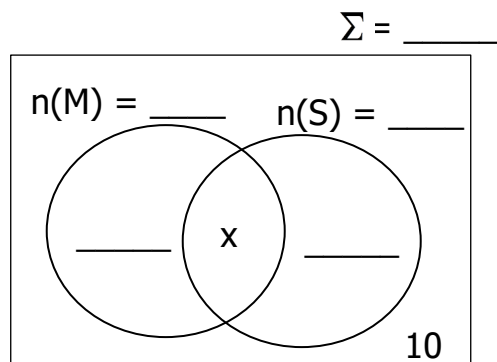
19. The area of a square is 25dm^2 . Calculate its perimeter.

20. Amina is 3 years older than Ali. If their total age is 43 years, how old is Amina?

SECTION B

21. In a P. 6 class of 60 pupils, 30 like Mathematics (M), 26 like Science (S), x pupils like both Mathematics and Science while 10 do not like any of the two subjects.

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

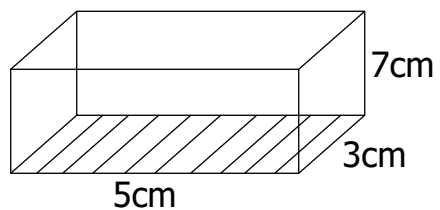


(b) Find the value of x .

(c) How many pupils like only one subject?

(d) What is the probability of picking a pupil at random who like both subjects?

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



(a) Calculate the perimeter of the shaded part.

(b) Find its volume.

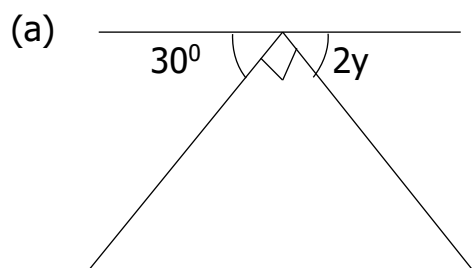
23. There are 600 pupils in a school, $\frac{2}{5}$ of them are boys and the rest are girls.

(a) Find the fraction that represents girls.

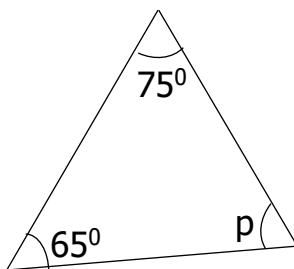
(b) How many more girls than boys are there in the school?

24. The sum of the 3 consecutive even numbers is 126. Find the average of the last two numbers if the smallest number is $r + 1$.

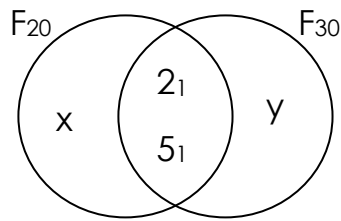
25. Find the value of the unknown.



(b)



26. Use the Venn diagram below to answer the questions that follow.



(a) Find y and x

(b) Use the above Venn diagram to find the LCM of F_{20} and F_{30} .

27. Pupils scored the following marks as tabled below in a test.

Marks	40	70	80	75
No. of pupils	3	1	4	2

(a) How many pupils did the test?

(b) Find the number of pupils who scored below the modal mark.

(c) Find the modal frequency.

(d) Calculate the mean mark scored.

28. A mother shopped the following items for the family during Easter holiday

750grams of salt at Shs. 1500

2kg of sugar at Shs. 3200 per kg

2½ kg of rice at Shs. 3800 a kg

5kg of meat at Shs. 10,000 each kg

200g of spices at Shs. 3,000 every kg

(a) What was her total expenditure?

(b) If she was given back a change of Shs. 2,000. How much money did she have at the beginning?

29. Given the digits 5, 0, 6

(a) Form all the 3 digit numbers from the above digits.

(b) Find the difference between the highest and lowest numbers formed.

(c) Calculate the sum of the largest and least numbers formed.

30. Solve;

(i) $2x - 3 = 9$

(ii) $4(x+1) = 16$

(b) The width of a rectangle is x cm and its length is 4cm longer than its width. If its perimeter is 28cm,

(i) Find the value of x .

(ii) Calculate the area of the rectangle.

31. In Kachonga Primary School, there are two bells, one for lower and another for upper primary. The bell for lower rings every after 30 minutes and for upper every after 45 minutes. If the two bells first rung together at 8:00am, when did they ring again together?



32(a) Using a pair of compasses, a ruler and a pencil only, construct a triangle ABC whereby $AB = 8\text{cm}$
 $\angle ABC = 60^\circ$ and $\angle CAB = 45^\circ$.

(b) Measure;

(i) line AC _____

(ii) angle ACB _____

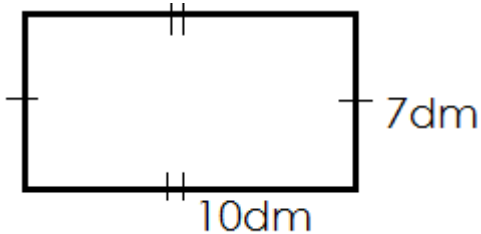
PAPER ELEVEN

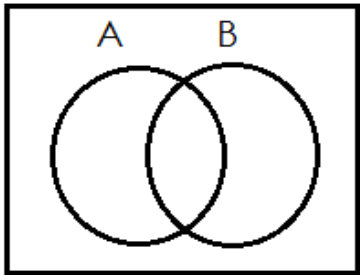
SECTION 'A'

1.	Multiply: $\begin{array}{r} 24 \\ \times 2 \\ \hline \end{array}$
2.	Find the square root of 64 .
3.	What is the value of 6 in the number 4 2, <u>6</u> 8 9?
4.	Simplify: $-3 + -4$
5.	Moses bought a bag at shs. 12,000 and later sold it at shs. 15,000. What was his profit?
6.	Given that set $N = \{ 2, 4, 6 \}$. Find the number of subsets in set N.

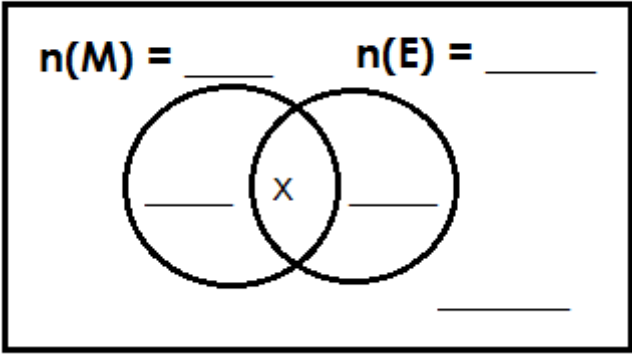
7.	Round off 4,967 to the nearest hundreds.
8.	What number has been expanded? 7000 + 40 + 2
9.	Using a pair of compasses, ruler and a pencil only, construct an angle of 60° in the space provided below.
10.	Subtract: $\frac{3}{4} - \frac{1}{3}$
11.	Find the least number of books that can be shared among 8 or 6 without leaving a remainder.



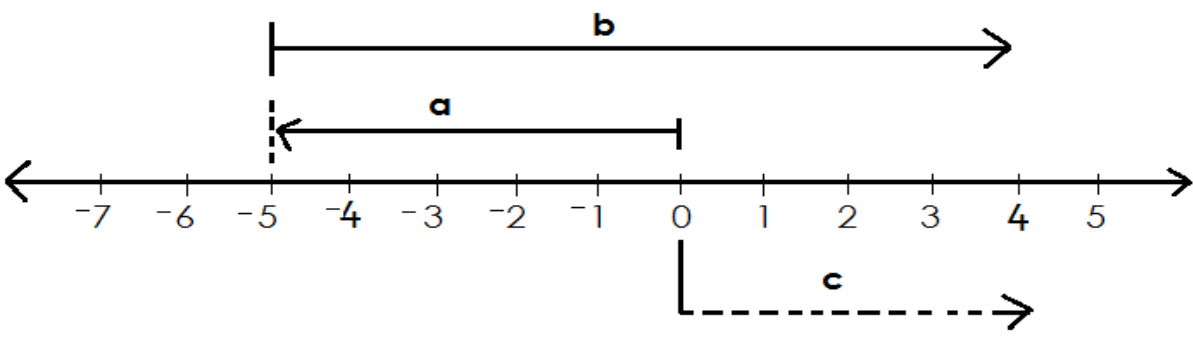
12.	Prime factorise 32 .		
13.	Solve for x $x + x + 4 = 16$		
14.	Calculate the area of the figure below: 		
15.	Write 24,378 in words.	16.	Express 4kg as grams.

17.	Mary is 13 years old in the year 2019. How old was she five years ago?	18.	Write 74 in Roman numerals.
19.	Divide 180 by 3 .	20.	Shade A^1 n B^1 in the venn diagram below. 

SECTION 'B' (60 MARKS)

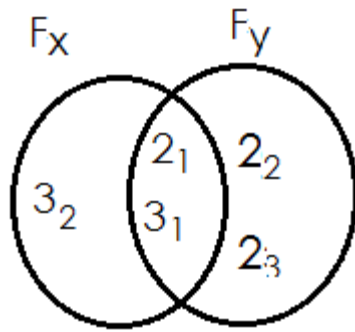
21.	In a class of 80 pupils, 50 like Mathematics (M), 40 like English (E), x pupils like both Mathematics and English while 5 pupils like neither Mathematics nor English.	
i)	Complete the venn diagram below: $n(\underline{\hspace{1cm}}) = \underline{\hspace{1cm}}$ 	(3mks)
ii)	Find the number of pupils who like both subjects.	(2mks)

iii)	Find the number of pupils who like only one type of subject. (2mks)									
22)	Use the digits 4, 2, 8 to answer the questions that follow.									
a)	Form the largest three digit number from the above digits. (1mk)									
b)	Form the smallest three digit number from the above digits. (1mk)									
c)	What is the sum of the largest and smallest numbers formed? (2mks)									
23)	Use the sum table below to answer the questions that follow:									
	<table><tr><td>2</td><td>a</td><td>6</td></tr><tr><td>b</td><td>5</td><td>1</td></tr><tr><td>4</td><td>3</td><td>c</td></tr></table>	2	a	6	b	5	1	4	3	c
2	a	6								
b	5	1								
4	3	c								
(a)	Find the magic sum. (2mks)									

b)	Find the values of boxes marked with letters. (1 mark each) i) a ii) b iii) c
24.	Use the number-line below to answer the questions that follow.  a) Identify integers marked with letters. (1 mk each) i) a ii) b iii) c
b)	Write a mathematical statement for the above number-line. (2mks)
25.	Re-arrange $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{6}$ and $\frac{1}{3}$ in ascending order. (5 mks)

26(a)	Add: (2 mks) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; width: 50%;">Weeks</th><th style="text-align: center; width: 50%;">Days</th></tr> </thead> <tbody> <tr> <td style="text-align: center;">2</td><td style="text-align: center;">5</td></tr> <tr> <td style="text-align: center;">+ 4</td><td style="text-align: center;">4</td></tr> <tr> <td style="border-top: 1px solid black; text-align: center;"> </td><td style="border-top: 1px solid black; text-align: center;"> </td></tr> <tr> <td style="border-top: 1px solid black; text-align: center;"> </td><td style="border-top: 1px solid black; text-align: center;"> </td></tr> </tbody> </table>	Weeks	Days	2	5	+ 4	4				
Weeks	Days										
2	5										
+ 4	4										
b)	Change $3\frac{1}{2}$ hours to minutes. (2mks)										
27.	John went to the market and bought the following items: • 2kg of beans at shs. 1 500 per kg. • 3kg of rice at shs. 3,500 a kg. • 2kg of meat at shs. 10,000 per kg. • 5 tomatoes at shs. 1,000. a) Calculate his total expenditure. (4mks)										
b)	If he went with shs. 50,000, what was his change? (2mks)										

28) Use the venn diagram below to answer the questions that follow:



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

b) Find the value of **y**. **(2mks)**

c) Find the GCF of **F_x** and **F_y** . **(1mk)**

29. a) What is the sum of the value of 4 and 6 in the number **7, 6 42**? **(2mks)**

b) Expand **2975** using powers of ten. **(2mks)**

c)	What is the place value of 7 in the number 28.6 <u>7</u> 3? (1mk)
30(a)	A car moved a distance of 240km in 3 hours. What was the car's average speed? (2mks)
b)	Sophia drove at an average speed of 70km/hr for 4 hours. What distance did she cover? (2mks)
31.	Derrick scored the following marks in the beginning of term exams. • 80, 70, 60 and 70.
a)	Calculate his average mark. (2mks)
b)	Find the mode. (1mk)

