

**TILDA AND PAUL PRI-SCHOOL  
MIXED DAY AND BOARDING  
P.O. BOX 43 ENTEBBE-MPALA TEL:0782634937/0754056534**

**LEARNERS' COMPANION IN MATHEMATICS  
(PASS P.L.E MATHEMATICS)  
BY  
INTERNAL EXAMMINATIONS BOARD OF TILDA AND PAUL  
PRI-SCHOOL  
AND APPROVED  
BY  
ACADEMIC ADMINISTRATION**

## MATHEMATICS SET ONE

1. What is the sum of first five prime numbers?

2. The bearing of L from M is  $045^{\circ}$ . Use diagram to find the bearing of M from L.

3. The median of three consecutive off number is 19. Find the sum of the number.

4. At meeting, Juma, Fred and Stella shared land in the ratio of 3:4:5 respectively. If Stella got 20 hectares how much land did they share altogether?

5. Find the complement of  $(y - 30)^{\circ}$

6. Solve  $\frac{4}{2r - 8} = \frac{5}{r - 20}$

7. In a group 80% of the members like Science and the rest like English. If 40 pupils like English, how many pupils were there in the group?	8. Given pattern 3,3,4,6,9,x,y,z, what is $x+yz$ .
9. How many $2\frac{1}{2}$ metres are in  10. 10 kilometeres?	11. Subtract $a + 2$ from $2a - 1$
12. Opolot moved 80km eastwards then moved 70km southeastwards. How far was he finally from his starting point during the shorted route?	
13. Kato drove from town P to town B at a speed of 80km/hr for $2\frac{1}{2}$ hours. He spent 30 minutes at B while taking breakfast. From B he went on town C a distance of 120km while	

driving at a speed of 60km/hr.

a) Calculate Kato's average speed for the whole journey.

b) Muhelle drove her car at a constant speed of 60km/hr. What distance did he cover in 90 minutes

14. Sylvia bought the following items from the super market.

- 3kg of beans at shs. 3200 @kg.
- 1  $\frac{1}{2}$  kg of salt at sh. 1800 every kg.
- 250g of meat sh. 8,000 a kg
- 8 apples at sh. 1200 every 2 apples
- 4 paper bags at sh. 4,000

a) How much money did she spend altogether?

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

15. Solve  $3(y+2) = 2(y+7)$

b) Solve for x.  $(3x-4) - (x+6) = 0$

## MATHEMATICS SET TWO

1. Workout 2.4 – 1.65

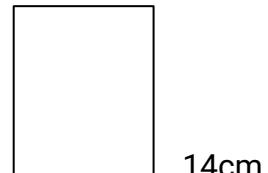
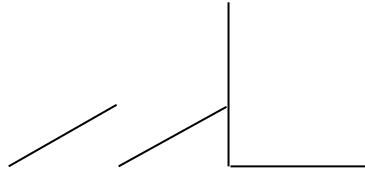
2. Increase 1400 in the ratio of 5:2

3. Given that  $y = 5x - 3$  and  $x = 2$ .  
Determine the value of  $y$ .

4. Solve for  $x$  if  $2^{2x} \times 2^{3x} = 64$

5. When  $K$  is decreased by 40% it becomes 480. What is  $\frac{1}{2}$  of  $K$ .

6. Find the total surface area of the figure below



13cm 13cm

9cm

7. Express 0.04024 in standard form

8. 12 boys can finish a piece of work in 30 days. How many more boys are needed to finish the same work in 18 days?

9. Find the perimeter of the figure below (Take  $\pi = \frac{22}{7}$ )



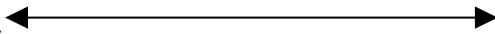
42cm

10. If  $\frac{5}{18} m^2 = 10$ . What is m?

11. The diagram below shows a running truck.



56m



110m

a) Find the total length of the truck

b) Find its area in are's

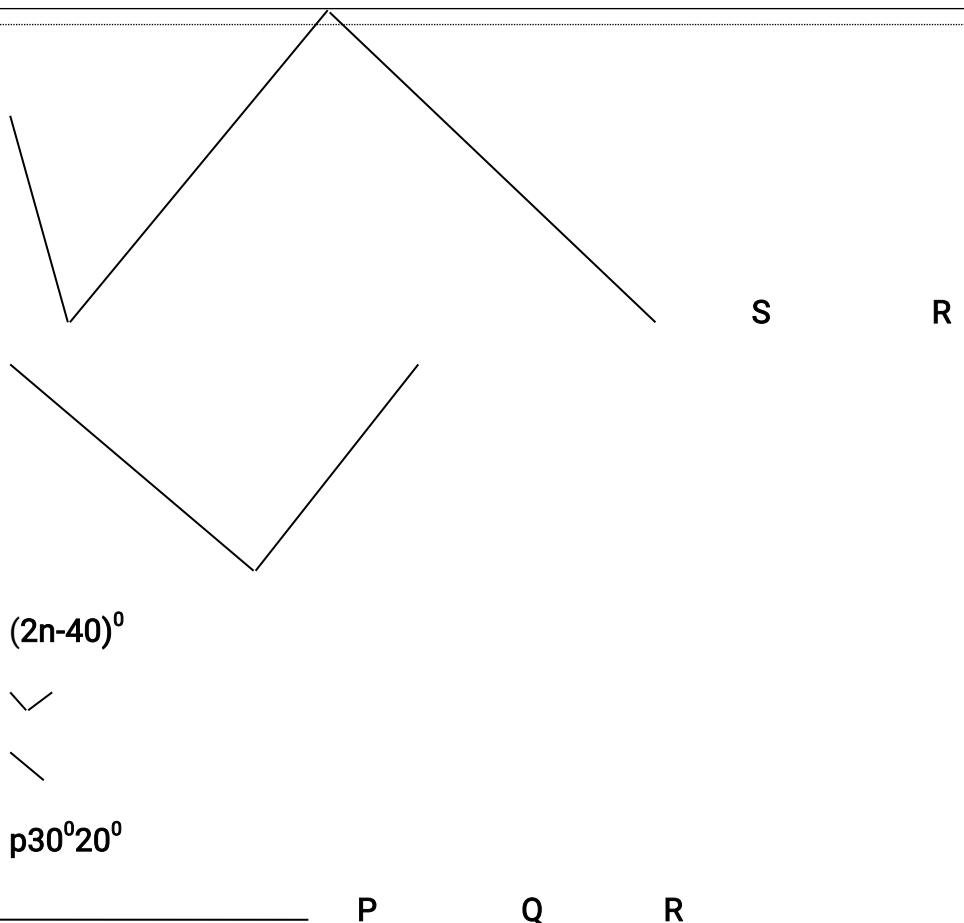
12. After selling a goat at sh. 150,000, a trader made a loss of 40% of the cost price.

a) What was the trader's cost price?

b) At what price must he sell to make a profit of 30%?

13. In a market the cost of a calf is 3 times the cost of a goat. Akello bought a calf and a goat at sh. 360,000. Find the cost of each of the two animals.

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

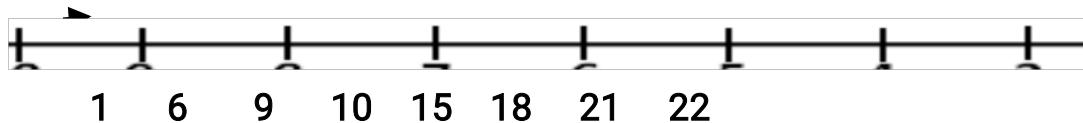


i) Find the value of p and n

ii) Find the size of angle QRS

MATHEMATICS SET THREE

1. Find the sum of the next two numbers in the sequence below



2. Write CDXLIX in words

3. Oketcho had 72 sweets and Mugisha had a half as many as Oketcho's. Find the total number of sweets which both had?

4. Change 12 hectares into metres

5. A P.6 end of term briefing session ended at 2:45pm which started at 11:15am how long was the briefing session?

6. The cost of a tray of eggs is shs. 7500. How many eggs can i buy with sh. 9,000.

7. Given that  $x = 2$ ,  $y = -3$  and  $z = -5$ .

$$\text{Evaluate } \frac{yz + z}{xy}$$

8. Simplify: $3(n+1) - (3-n)$	9. Alex's body temperature was $40^{\circ}\text{C}$ . What was his temperature in degrees Fahrenheit?
10. Natalia withdrew five thousand shilling notes numbered consecutively from AB3304177 to AB 3304200. How much money did she withdraw?	11. Instead of making a profit of 12%. Male made a loss of 15% while selling a turkey at sh. 34,000. At what price should he have sold it to hit his target?
12. A group of girls were served with children or beef or both. 70% were served with	
10 INTERNAL EXAMINATIONS BOARD OF TILDA AND PAUL P/S. P.O.BOX 43, ENTEBBE – MPALA TEL: 0782634937/0754056534	

chicken and 65% were served with beef. If 175 were served with both.

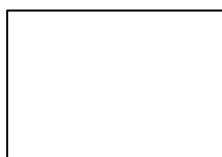
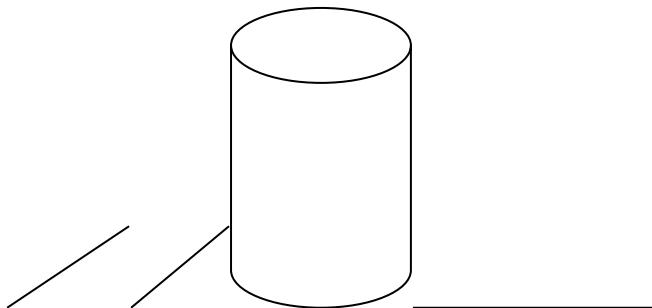
a) How many were served with chicken?

b) How many were served with only one type?

13. It is given that the rectangular and cylindrical containers (shown below) have the same capacity. What is the height of rectangular container.

← →

42cm



10cm



14cm

30cm

14. The interior angle of a regular polygon is 5 times the size of the exterior angle.

a) Find the size of the exterior angle

b) Name the polygon

c) Calculate its interior angle sum.

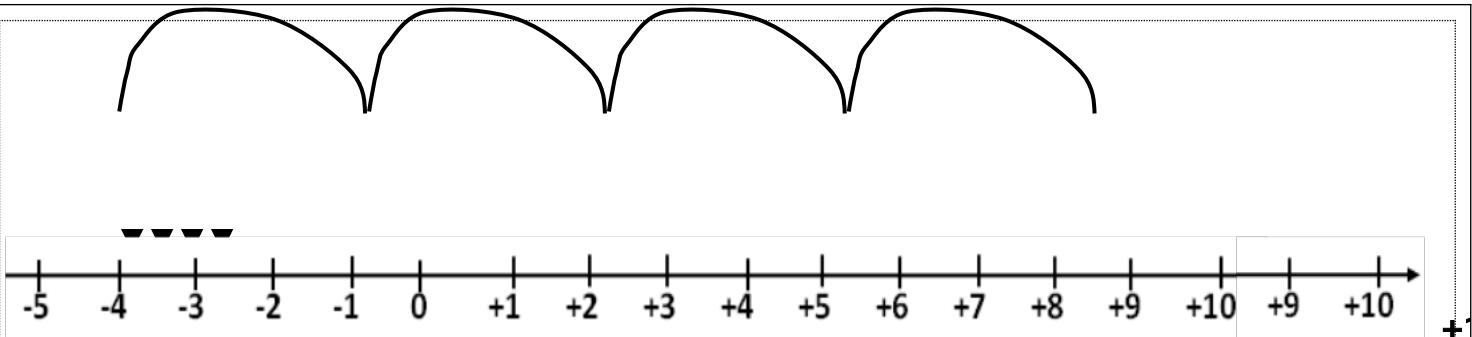
15. In a class, there are 20 more girls than boys. The fraction of girls in the class is 0.8. Find the total number of pupils in the class.

#### MATHEMATICS SET FOUR

1. Divide  $48 \div 12$

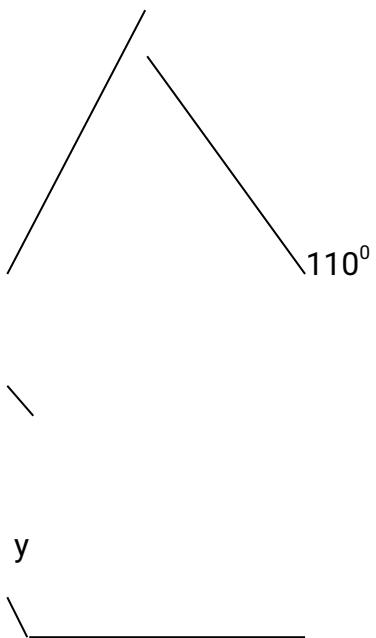
2. Add:  $\frac{3}{8} + \frac{1}{4}$

3. What multiplication mathematical statement is shown on the number line?



4. A P.T.A General meeting at Kanoni Primary School started at 9:50am and ended at 12:10pm. How long did the meeting last?

5. In the diagram below, find the value of  $y$ .



6. Find the median of 3, 5, 0, 7, 4 and 8

7. Electric poles are planted 50 metres apart. Anita moved from the 5<sup>th</sup> pole to the 10<sup>th</sup> pole. Find

the distance covered by Anita.

8. Express 0.7272... as a common fraction

9. Today is Friday. What day of the week was it 58 days ago?

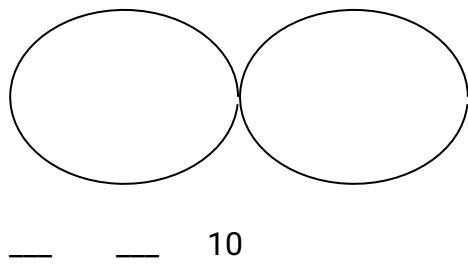
10. What percentage of 2kg is 600g?

11. In a village there are 75 homes of which  $(x+5)$  homes own Radios only(R), 10 homes own TVs (T) only, 24 homes own both Radios and TVs, while  $x$  homes own neither of the two.

- a) Use the information to complete the venn diagram

$$n(\Sigma)=74$$

$$n(R)=\underline{\quad} \quad n(T)=\underline{\quad}$$



- b) Find the value of  $x$ .

- c. How many homes own radios?

12. Musimenta went shopping and bought the following items

Item	Quantity	Unit cost	Amount
Rice	3kg	Shs. 3,000	Shs. _____ _____
Sugar	2 $\frac{1}{2}$ kg	_____	Shs. 5,000
Paraffin	_____ litres	Shs. 3600	Shs. 5400
	Total	Shs. _____	Shs. _____

a) Complete the table above

b) If she used shs. 2,000 for transport to and from the market, calculate her total expenditure .

13. The table below shows the scores of the pupils in Mathematics test

Scores	4	5	6	-	9
No. of pupils	4	-	1	8	-

Total marks	10	45	-	5	6	4	5
			-				
			-				
			-				
			-				

a) Complete the table above

b) Find the range of the scores

c) Calculate the average marks

14. Mugole left town K and drove eastwards to town B a distance of 36km. He then drove northwards from town B to village P a distance of 48km and returned directly from P to town K.

15. Using a scale of 1cm represent 6km, draw accurate diagram to show Mugole's journey.

b) Find the shortest distance from town K to village P in km.

### MATHEMATICS SET FIVE

1. Simplify  $4m - 5n + m - 2n$

2. Debra is 17 years now, represent her age using tallies.

3. Simplify:  $3^2 \times 2^0 \times 3^3$

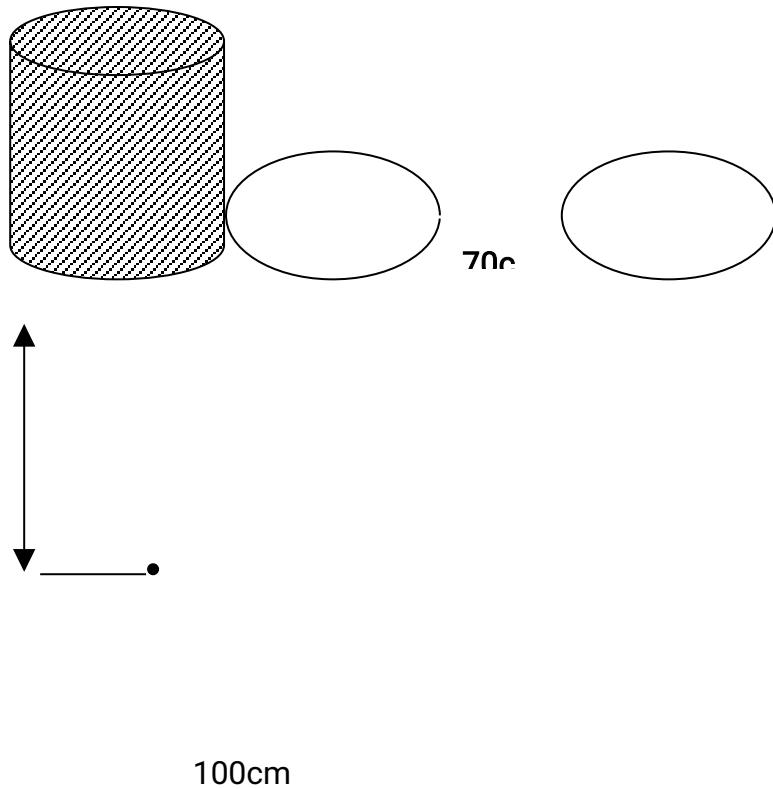
4. Use the distributive property to workout  $(100 \div 5) - (25 \div 5)$

5. At party, Mugisha sat visitors in fives and one remained. When he sat in elevens eight remained. Find the least number of visitors he was able to sit.

6. Solve for x;  $4 - 2x < 8$

<p>7. A tailor had 13.2m of cloth. If 3.4m is used to make a dress. How many centimetres of cloth remained?</p>	<p>8. Write 49.013 in expanded form using place values.</p>
<p>9. Wasswa is 12cm shorter than Kigongo. If the sum of their heights is 96cm. Find Wasswa's height.</p>	<p>10. The mean age of 3 children is 20. The total age of two children is 40 years. Find the age of the third child.</p>

11. The diagram below shows a cylindrical tank found on the major Davy farm. Its radius is 70cm height as 100cm it is filled with milk every day. Study it carefully and answer the questions that follow



a) How many litres of milk does the above tank hold when it is completely full? (Take  $\pi = \frac{22}{7}$ )

b) If each litre of milk is sold at shs. 2,000, how much money does the major get a day when all the milk in the tank is sold.

12. Construct a triangle PQR with PQ = 6cm, angle PQR =  $60^\circ$  and angle QPR =  $45^\circ$ . Use a pair of compasses, a pencil and a ruler only.

- b) Measure angle QRP  
c) Drop a perpendicular line through R to meet PQ.

13. Study the exchange rates below and answer the questions that follow

- 1 US Dollar (\$) = Ug shs. 3600
- 1 British pound (£) = Ugsh. 4500
- 1 Kenya shilling (Ksh.) = Ug. Shs. 30

a) Mr. Lule had Ug. Shs. 360,000 which he exchanged into pounds. How many pounds did he get?

b) Darlan bought a phone from USA at \$ 400. What is the cost of the same phone in Kenya shillings?

### MATHEMATICS SET SIX

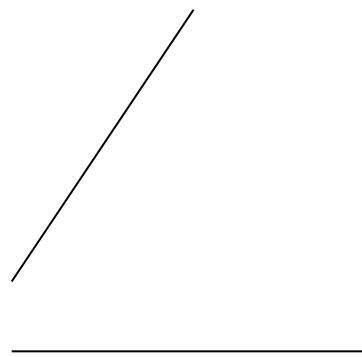
1. What is  $22 \frac{1}{2} \%$  of sh. 6000

2. Write 40,049 in words.

3. \_\_\_\_\_ Simplify

$$\frac{1}{12} - \frac{1}{3} \text{ of } \frac{1}{3}$$

4. Find the value of n in the figure below



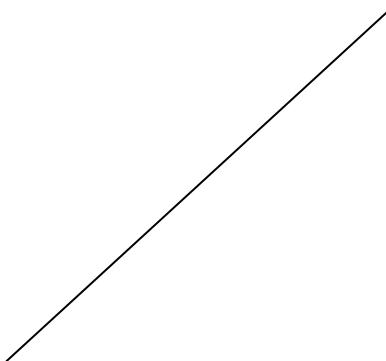
$$n+60^0$$

5. The cost of a spoon is shs. 4000 more than that of a fork, a knife costs five times the cost of fork. If the cost of the three items is sh. 81000. Find the cost of a fork.

6. Today is Wednesday 8th March, 2017. What day of the week was it on the 17th November, 2016?

7. Using a ruler and a pair of compasses only.

Construct an angle of  $22\frac{1}{2}^{\circ}$ .



R

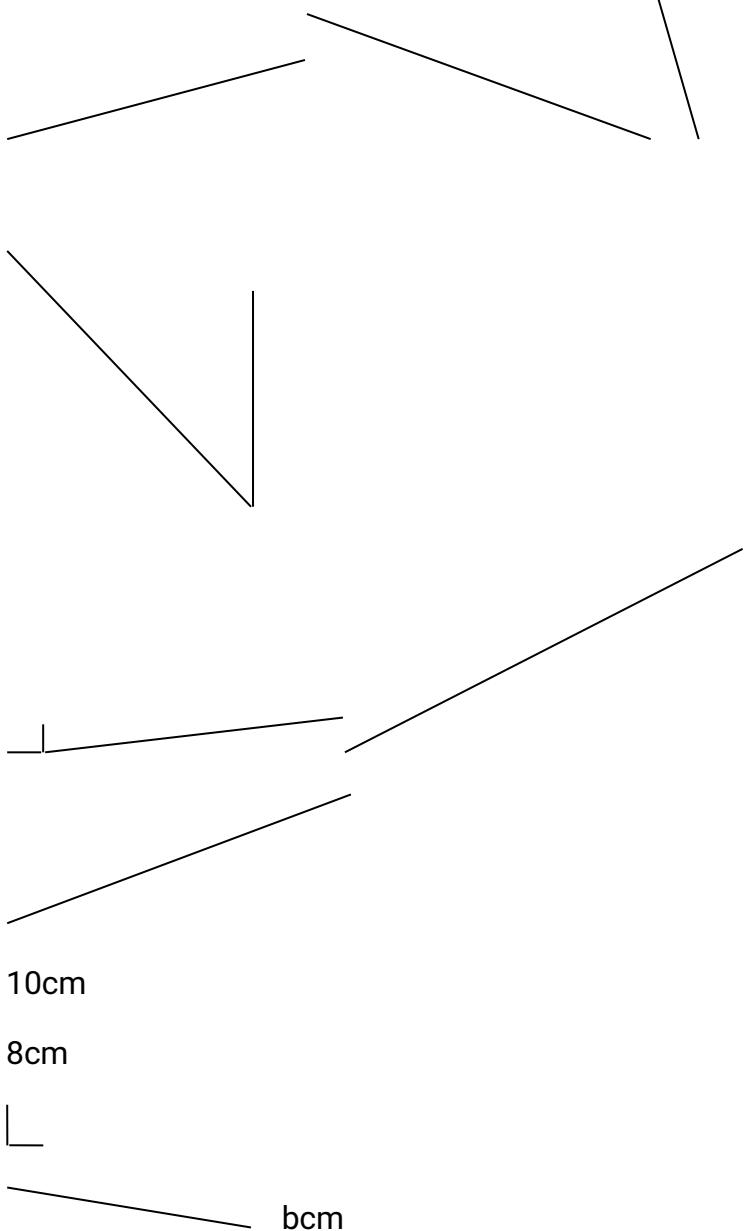
8. Find the bearing of A from B



9. Express 1215hrs to 12 hour clock system

10. Change 120ml to litres.

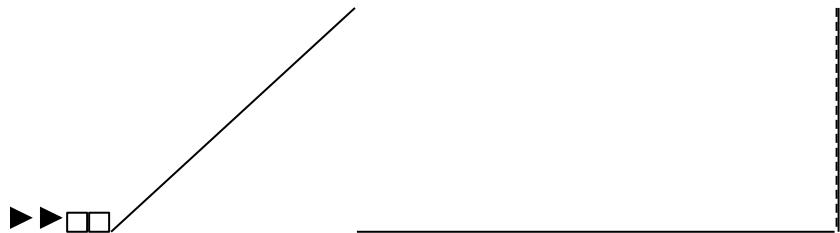
11. The volume of a triangular prism is 240cm. calculate the base of the prism if the height is 8cm and length is 10cm.



b) Find the total surface area of the prism.

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

A 6cm B 3cm E



— 4cm

□\

►—————D C

a) How many lines of folding symmetry has ABCD?

b) Find the area of ABCD

c) Calculate the area of BCE

d) Find the area of the figure

13. A tank has two taps that pour water into it. Tap A turned on alone Fill the tank in 20 minutes. Tap B turned on alone fills the tank in 10 minutes. How long will the two taps turn on at the same time take to fill the tank?

14. Two squares have sides of length 8cm and 10cm respectively. Find the ratio of their areas.

15. a) Solve:  $3a + 2(a+4)=2(2+a)$

b) Simplify:  $4(x-y) - (4x-4y)$

## MATHEMATICS SET SEVEN

1. The table below shows the time table of the yy bus from Mbale to Kampala.

Town	Arrival	Departure
Mbale		0945hrs
Namutumba	1030hrs	1035hrs
Iganga	1100hrs	1145hrs
Jinja	1210hrs	1212hrs
Kampala	1339hrs	

a) How long did the bus take to travel Namutumba to Kampala?

b) How many more minutes did the bus spend in Iganga than Jinja?

c) What arrival time in Kampala in 12 hour clock system?

d) If the distance between Mbale and Kampala is 360km. Calculate the average speed of the bus for the whole journey.

2. The table below shows the arrival and departure time for the bus travel from Kampala to Hoima daily

Town	Arrival	Departure
Kampala		7:30am
Busunju	8:10am	8:30am
Kukomero	9:30am	9:45am
Kiboga	10:15am	10:40am
Hoima	11:40am	

i) At what time does the bus leave Kampala?

ii) How long does the bus stay at  
Bukomero?

iii) How long does the bus take to travel  
from Bukomero to Kiboga?

3. Study the aeroplane time table below then answer the questions that follow

Town	Arrival	Departure
Accra		2315hrs
Entebbe	0400hrs	0435hrs

Nairobi	0645hrs	0815hrs
Khartoum	1040hrs	

a) How long does the plane take between;  
 i) Accra and Entebbe?

ii) Entebbe and Nairobi?

b) How long was the plane's stop out Nairobi?

c) How long did the plane take to travel from Accra to Khartoum?

4. The table below shows how a motor cyclist travelled from town R through town Q and S to town P.

Town	Arrival	Departure
------	---------	-----------

R		9:00am	
Q	9:30am	4:42am	
S	10:35am	11:10am	
P	1:30pm		

i) How long did the motor cyclist stay at town S?

ii) Find the time the motor cyclist took to travel from town R to town P.

iii) Write the arrival time at town P in 24 hour clock system

iv) If the distance from town R to town P is 240km. Calculate the average speed of the motorcyclist for the whole journey.

5. The table below shows routes taken by taxis of a company. Find the departure time in;

R	Time taken	Arrival	Departure time

o u te		time	
A	5hr 30 minutes	1630hrs	
B	7 hrs 15 minites	1510hrs	
C	4 hrs 25 minutes	0500hrs	

i) 24 hour system

ii) a.m / p.m

### MATHEMATICS SET EIGHT

1.  $\frac{1}{3}$  of the fruits in a basket are oranges,  $\frac{2}{5}$  of the remainder are passion fruits and the rest of the fruits are guavas. If there are 20 guavas in the basket, how many fruits were in the basket altogether?

2. Akullo bought a T.V set at sh. 300,000 and later sold it at a loss of 7%

a) Calculate her loss in shillings

b) What was Akullo's selling price?

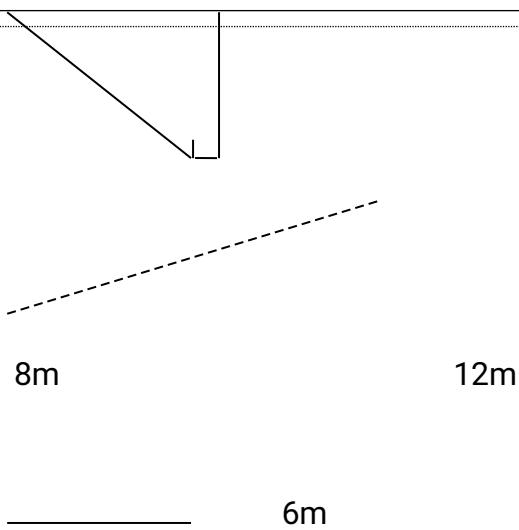
3. From the figure below, find

a)



Find the

value of  $h$ .



b) Find the volume of the prism

c) Find the total surface area of the prism

4. A water tank at Kabagoma Primary School is  $\frac{1}{3}$  full of water, when 6,000 litres of water is added it becomes  $\frac{3}{4}$  full

a) How many litres of water does it contain when it is completely full

b) Find  $\frac{1}{20}$  of the tank when full

5. Mr. Katungye has 3 sons. Peter, Andrew and James. Peter is 3 years older than Andrew and James is 4 years younger than Andrew. In 6 years' time their total age will be 53 years. Find the age of each boy now.

**MATHEMATICS SET NINE**

1. What is the sum of the five prime numbers	2. The bearing of L from M is $045^{\circ}$ . Use diagram to find the bearing of M from L.
3. The median of three consecutive odd number is 19. Find the sum of the number	4. At meeting, Juma, Fred and Stella shared land in the ration of 3:4:5 respectively. If Stella got 20 hectares, how much land did they share altogether?
5. Find the complement of $(y - 30)^{\circ}$	6. Solve $\frac{4}{2r - 8} = \frac{5}{r - 20}$
7. In a group, 80% of the members like science and the rest like English. If 40 pupils like English, how many pupils were there in the group?	8. Given a pattern 3,3,4,6,9,x,y,z, What is $x + yz$ .

9. How many $2 \frac{1}{2}$ metres are in 10 kilometres.	10. Subtract at 2 from 29 – 1
11. Opolot moved 80km eastwards them moved 70km Southeast wards. How far was he finally from his starting point –by the shortest route?	
12. Kato drove from town A towards B at a speed of 80km/hr for 2 $\frac{1}{2}$ hours. He spent 30 minutes at B while tasking breakfast. From B he went on town a distance of 120km while driving at a speed of 60km/hr.	
a) Calculate Kato's average speed for the whole journey.	b) Muchelle drove her car at a constant speed of 60km/hr. What distance did he cover in 90 minutes?

13. Sylvia bought the following items from the supermarket.

- 3kg of beans at shs. 3200 each kg
- 1  $\frac{1}{2}$  kg of salt at sh. 1800 every kg
- 250g of meat sh 8,000 a kg
- 8 apples at sh. 1200 every 2 apples
- 4 paper bags at sh. 4,000

a) How much money did she spend altogether?

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

14. a) Solve  $3(y + 2) = 2(y+7)$

b) Solve for x.  $(3x-4)-(x+6)=0$

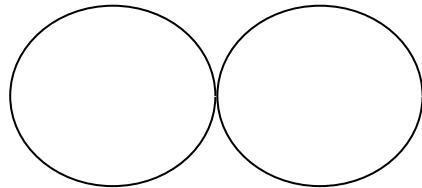
### MATHEMATICS SET TEN

1. The volume of a cube below is 1 litre. Find the length of that cube.

2. Find the mean of  $3b$ ,  $b$  and  $2b$

<p>3. Two bells ring at an interval of 30 minutes and 40 minutes. If they both rang at 8:00am, at what time will they ring together again?</p>	<p>4. Solve <math>\frac{x}{2} + \frac{x}{3} = 5</math></p>
<p>5. If 24 is increased by x% it becomes 27. Find the value of x.</p>	<p>6. Evaluate <math>\frac{2}{3} \times \left(\frac{1}{4} - \frac{1}{12}\right) \div \frac{1}{5}</math></p>
<p>7. Use the venn diagram below to find the value of x.</p>	<p>8. 4 men take 9 days to slash a compound. How many more men needed to do the same job in only 2 days?</p>

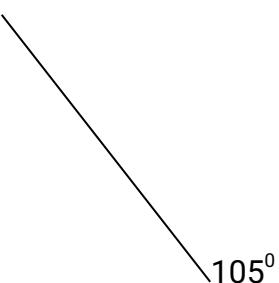
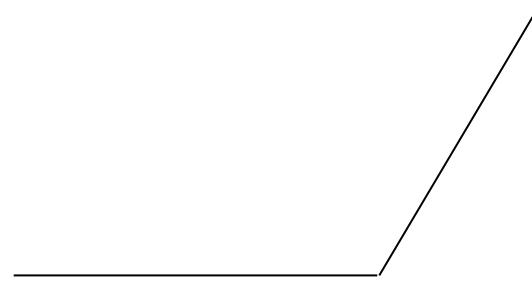
A       $n(B)=20$



$4x$     $x+2$

9. Find the LCM of two numbers. If their product is 250 and their GCF is 5.

10. Find the size of the angles marked P.



\//

q

p

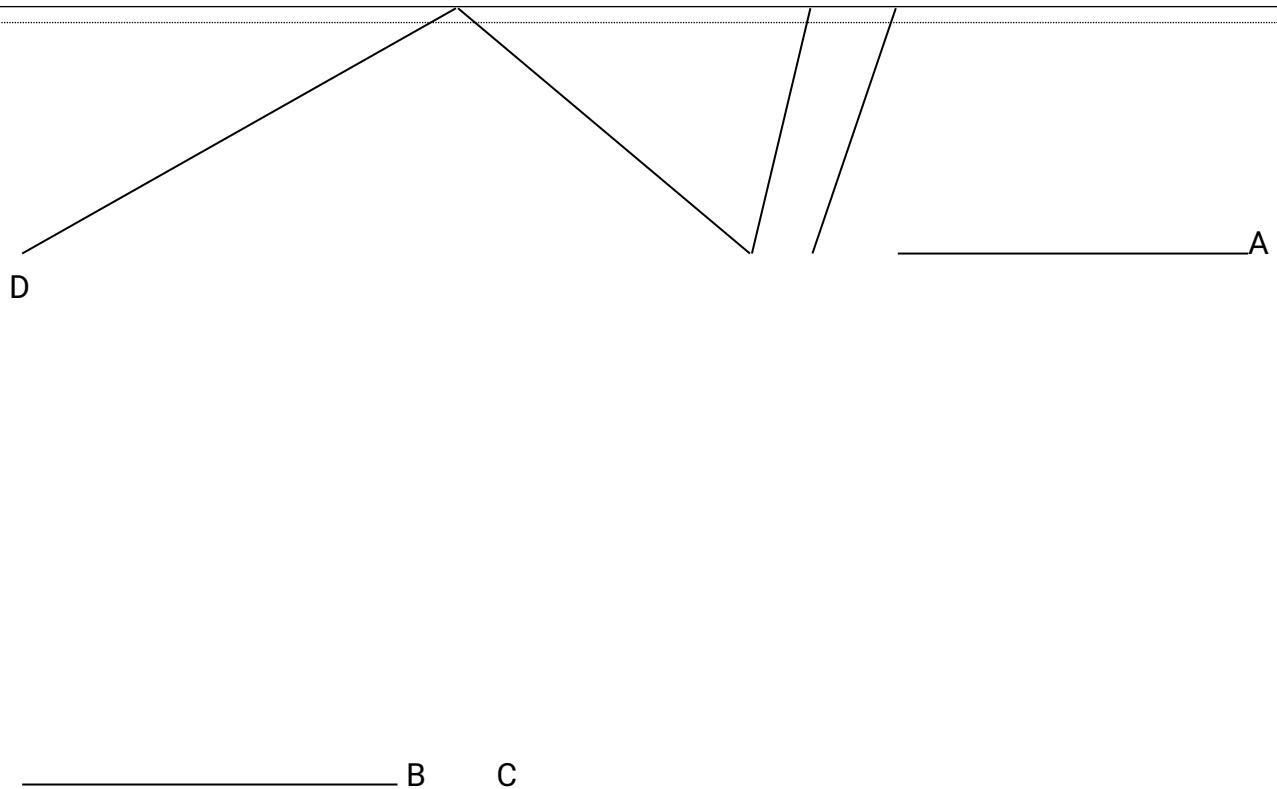
11. The table below shows how Mr. Okello spend his salary to buy the following items

a) Complete the bill shown

Items	Quantity	Rate per unit	Cost in shs.
Sugar	2 $\frac{1}{2}$ kg	Sh. 2,200	_____
Meat	_____ kg	Sh. 10,000	Sh. 5,000
Soap	3 bars	_____	Sh. 3600
Salt	$\frac{1}{2}$ kg	Sh. 4000	Sh. _____
Total			Sh. _____

b) If he was given an discount of 10% for all the four items. Find how much he paid.

12. The area of a rhombus is 96cm<sup>2</sup>. One of the diagonal is 12cm.



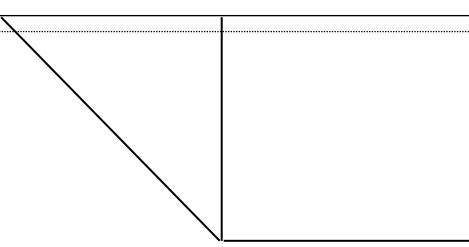
a) Find the length of diagonal BD

b) Find the perimeter of the rhombus

13. In the school garden, there are 25 more mango trees than orange trees and 30 more orange trees than Jack fruit trees. If there are 100 trees altogether, how many trees of each type are in the garden?

14. The figure below shows a piece of land in form of a trapezium. Use it to answer the questions  
a) If the perimeter of the figure is 45m.

(3y+1) Find the value of y.



2y

(3y+4)

(3y+7) b) Find the area of the land

---

### MATHEMATICS SET ELEVEN

1. A tax travelling at 90km/hr took 2hrs 20 minutes to cover a certain distance.

a) Find the distance covered

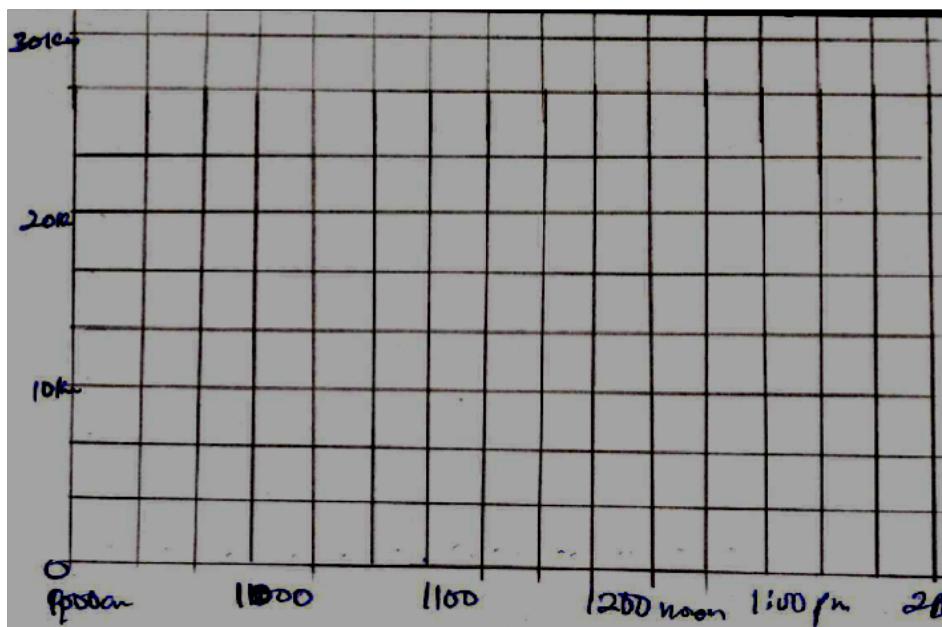
b) Peter walks 25 metres in 5 seconds. Express his speed in km/hr

2. A moptorist left town A driving at steady speed of 60km / hr for 2 hours to town B. He then left B and drove 2 hours 30 minutes to town C coverin g a distance of 120km.

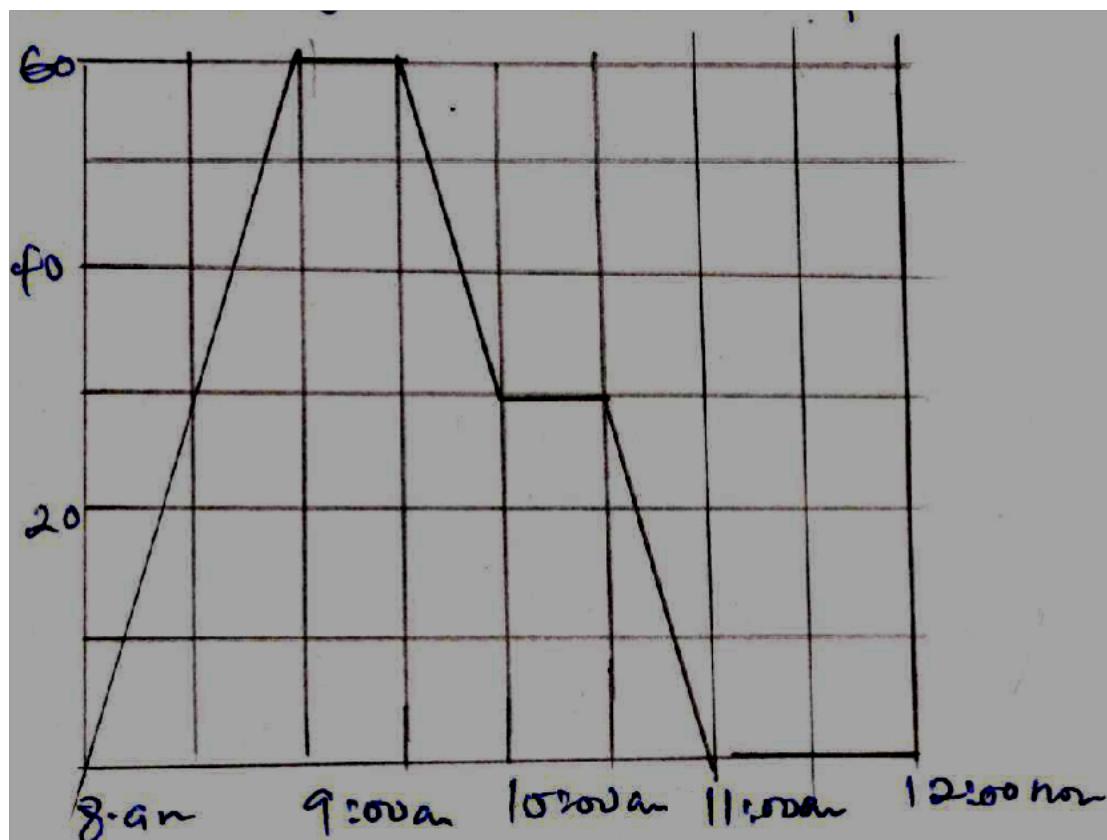
a) How far is twon B from town A?

b) Calculate the average speed of the motorist for the whole journey.

3. Emmanual left home at 8:00am riding a morocycle at an average speed of 15km/ hr for  $1\frac{1}{3}$  hrs to town A. He rested for 40 minutes ast town A then continued town B covering distance of 10km in  $1\frac{1}{3}$  h without resting he retuned home reaching there at 1:00pm.



4. The graph below shows Mukasa's journey use it to answer questions that follow



a) At what time did Mukasa start the return journey?

b) What is the total time for stop over?

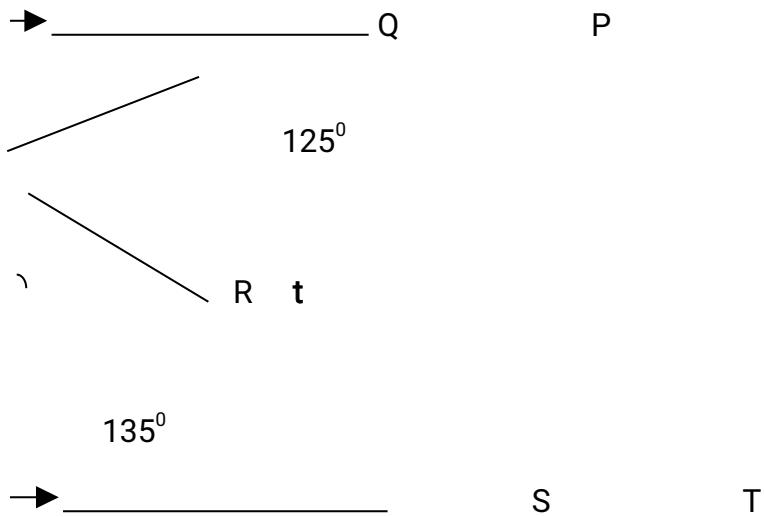
c) What was Mukasa's average speed for the whole journey in km/hr?

## MATHEMATICS SET TWELVE

1. What is the value of 4 in the number 248.5?

2. Find the square root of  $12 \frac{1}{4}$

3. Find the size of angle t in the figure



4. Given that 4 litres of a liquid weigh 3.7kg, how many kilogrammes are in 16 litres.

5. Subtract: Hrs Min

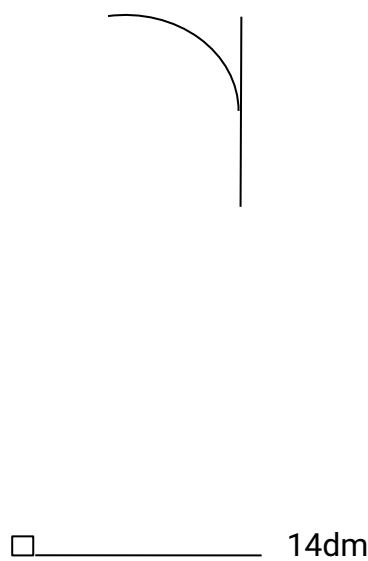
9 10

- 6 55

---

---

6. Find the perimeter of the figure below



If represents 15 balls. How many pictures can be used to show 75 balls?

8. Increase 8000 by  $12\frac{1}{2}\%$

9. Arrange the following fractions in order beginning with the biggest

$$\frac{1}{2}, \frac{2}{3}, \frac{3}{5}$$

10. How long will a loan of sh. 500,000 at a simple interest rate of 20% per annum take to

yield simple interest of sh. 75,000?

11. A man sells mangoes in heaps of eight and ten. A heap of eight mangoes cost sh.1200 and a heap of ten mangoes costs shs. 1500. He had 10 heaps of eight and 14 heaps of ten mangoes.

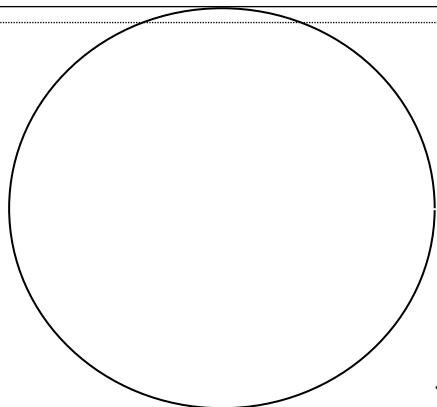
a) How many mangoes did he have altogether?

b) How much money did he get after selling all the mangoes?

12. Square tiles of side 20cm each were laid on the floor of a room measuring 600cm by 400cm

a) Find the number of tiles needed to cover the floor.

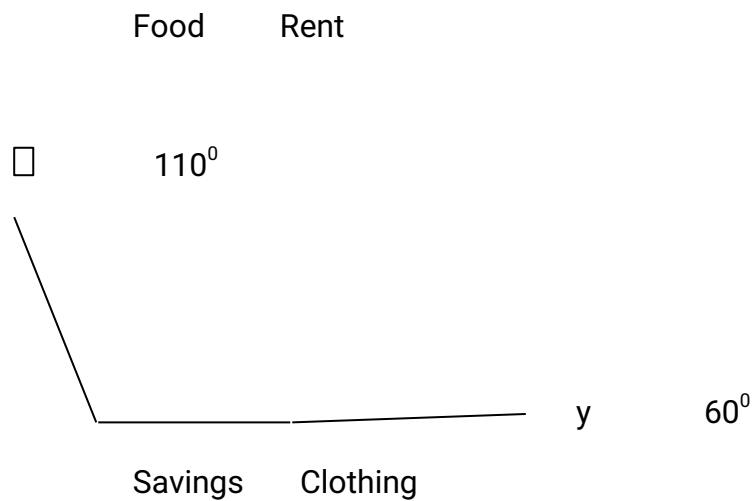
b) If a box containing 25 tiles costs sh. 30,000 find the total cost of tiles needed to cover the whole floor.



13.

The pie-chart below shows how Matata spends his monthly salary. Study it carefully and answer the questions that follow

a) Find the value of  $y$ .



b) If he spends sh. 360,000 on clothing, how much does he earn per month

c) Express money spent on clothing as percentage

## MATHEMATICS SET THIRTEEN

1. Workout:  $219 - 98$

2. Given that set K has 31 proper subsets, find  $n(K)$

3. Write seven million sixty eight thousand three hundred four in figures

4. Simplify:  $\frac{3}{4} \div \frac{7}{8}$

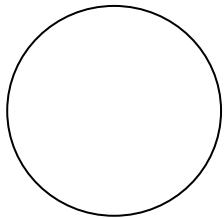
5. Find the next number in the sequence

4, 7, 13, 22, 34, \_\_\_\_\_

6. Solve  $2(x + 5) - 14 = 36$

7. Below is a semi circular plot of diameter 56m. Find the distance around the plot.

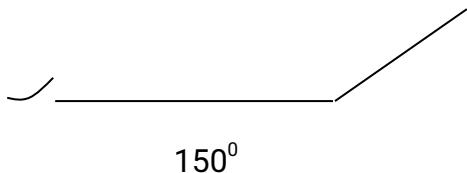
8. Evaluate:  $101_{\text{two}} + 111_{\text{two}}$



9. For every 2 boys there are 5 girls in a class of 105 pupils. How many girls are there?

10. The cost of 7 plates is sh. 84,000, find the cost of 4 plates.

11. Calculate the size of angle k.



12. What is the value of;

$$7.32 - 3.07 + 2.5$$

)

k

~

$101^0$

13. The population of a town increased from 40,000 to 64,000. What was the percentage increase?

14. Expand 97843 using values

15. A family uses 700ml of milk per day. How many litres of milk did the family use during the month of April?

16. Write 969 in Roman numerals.

17. Simplify:  $a^4 \div a^3 \times a^6$

18. 4 men can dig a piece of land in 8hrs. How many men will be needed to complete that work in 2hrs?

19. Solve:  $2y + 6 = 5$  (finite 9)

20. Given that  $y = 5x - 3$  and that  $x = 2$  determine the value of  $y$ .

## SECTION B

21. The cost of a story book is 3 times that of a pen and sh 900 less than the cost of a novel. The total cost of the three items is sh. 9300. Find the cost of each item. (6mks)

22. A bicycle wheel has a diameter of 28cm. How many revolutions does the wheel make to cover a distance of 880m? (5mks)

23. Given the numeral 48731.;

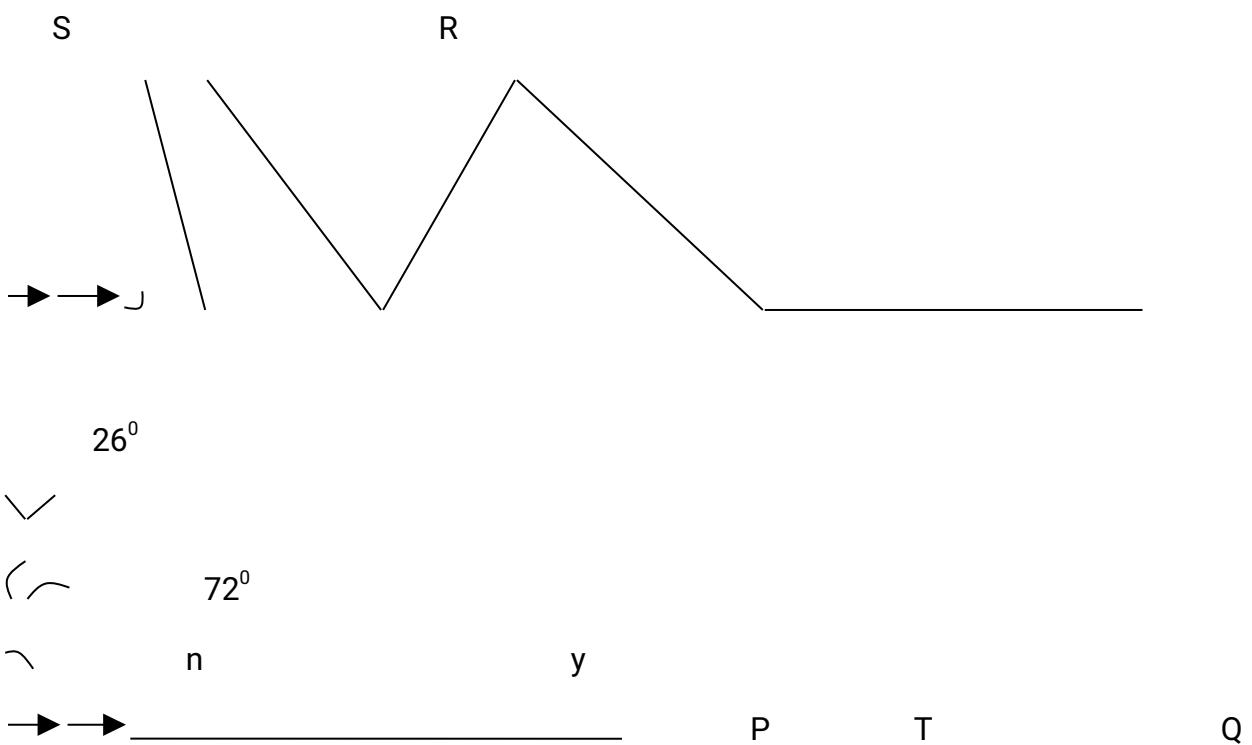
a) What is the place value of 8?  
(2mks)

b) What is the sum of the value of 7  
and the value of 3? (2mks)

c) Represent 403 on the abacus below (1mk)

H	T	O

24. In the diagram below PQRS is a parallelogram  $ST = TR$ , angle  $STR = 72^\circ$  and angle  $PST = 26^\circ$ .



a) Find the value of n (2mks)

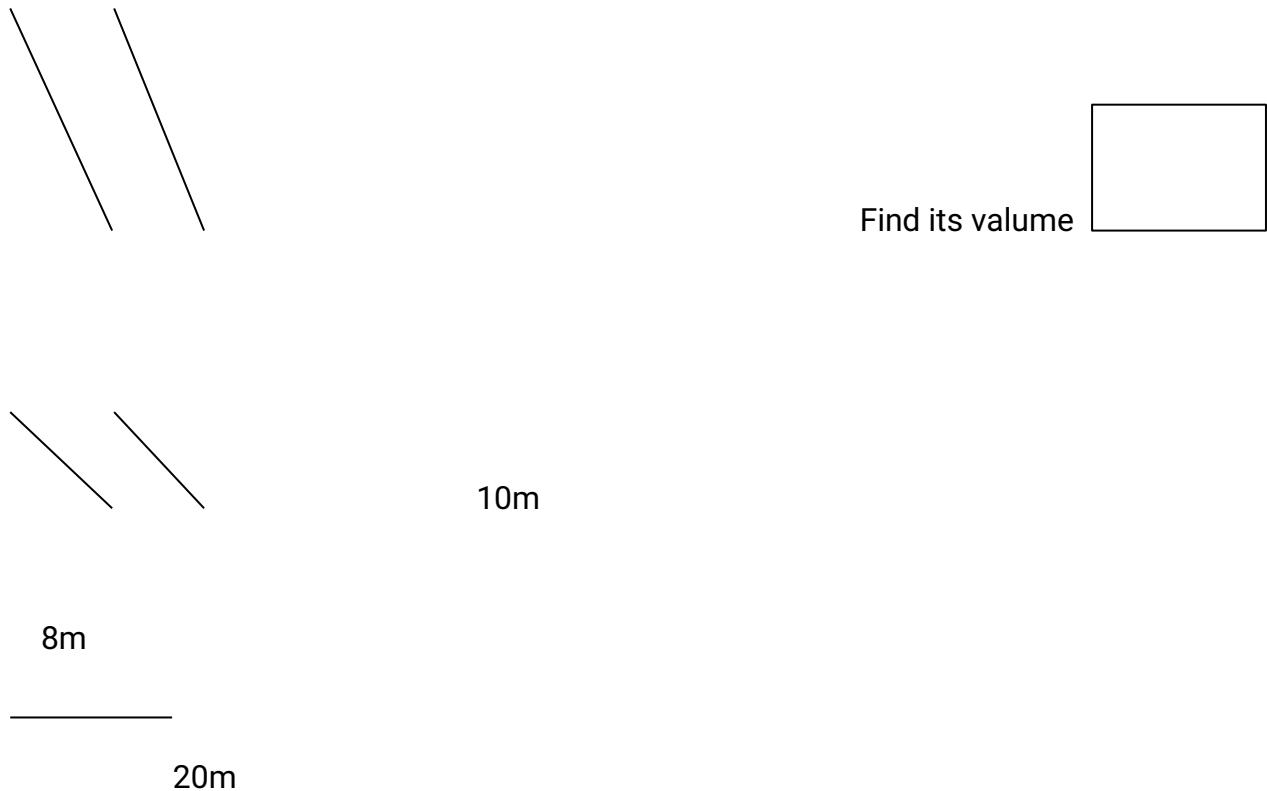
b) Find the value of y. (2mks)

25. Nduku spends  $\frac{2}{5}$  of his income on food,  $\frac{1}{3}$  on school fees. If he saves sh. 24,000 a month,

a) How much is his income?  
(2mks)

b) How much does he spend on school fees? (2mks)

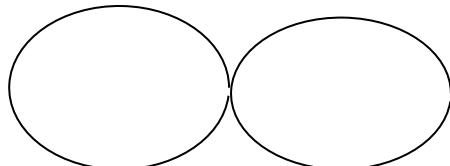
26. The figure below shows a triangular prism.



27. In a village of 63 farmers, 38 farmers grow cassava, 20 grow maize only, 15 farmers grow both cassava and maize and y farmers grow neither of the two crops.

a) Represent the above information on the venn diagram below.(3mks)

$$n(\Sigma)=63$$



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

n(C)

n(M)

15

28. Draw triangle RST in which  $\overline{RS} = 10\text{cm}$  and angle  $R = 65^\circ$  and  $\overline{RT} = 7\text{cm}$ . construct a perpendicular bisector from R to X on ST. Measure RX. (5mks)

29. Given the exchange rates are US\$ 1= 3500 Uganda shillings and Ksh 1= 30 Uganda shillings.

a) How much money in Uganda shillings can I get from US\$400? (2mks)

b) If a radio costs US \$ 20 find the cost of the radio in Kenya shillings. (3mks)

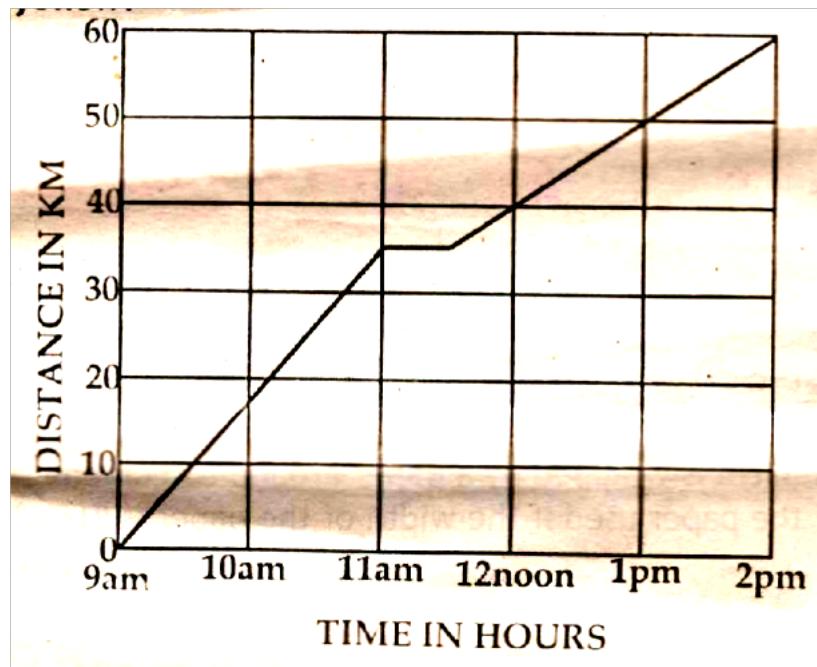
30. A cylindrical tim of diameter 35cm is wrapped by a paper around its curved surface. What is the area of the paper used if the width of the paper is 21cm? (4mks)

31. a) Workout;  $\frac{2}{5}x + 38 = 8x$  (3mks)

b) If  $P = 5$ ,  $Q = 6$  and  $r = 3$ , find the value  
of  $\frac{pqr}{29 + qr}$

(3mks)

32. The graph below shows a cyclist's journey. Use it to answer questions that follow



a)How much time did the cyclist use to rest? (1mk)	b)What was his speed after the stop over? (2mks)
--	--

 c)What was his speed for the whole journey? (2mks) |

## MATHEMATICS SET FOURTEEN

1. Work out: $32 \times 3$ .	2. Write 650,019 in words
3. Work out: $2 - 5$ (finite 7)	4. Find the next number in the sequence: -11, -8, -5, -2, ____
5. Solve the equation: $7n + 2 = 23$	6. Given that set $N = \{c, t, p\}$ , list all the subsets in $N$ .

7. Find the number which has been expanded below:  $(3 \times 10^2) + (5 \times 10^{-1})$

8. The profit on a shirt sold at sh. 7,900 was sh. 2,100. Calculate the cost price of the shirt .

9. Change 10 square metres into square centimeters

10. Write 9:30a.m in the 24 hour clock.

11. Workout:  $1\frac{1}{2} - \frac{2}{3}$

12. Find the value of the digit in the ten thousands place in the number 850634.

13. A box contains 20 pens, 10 are

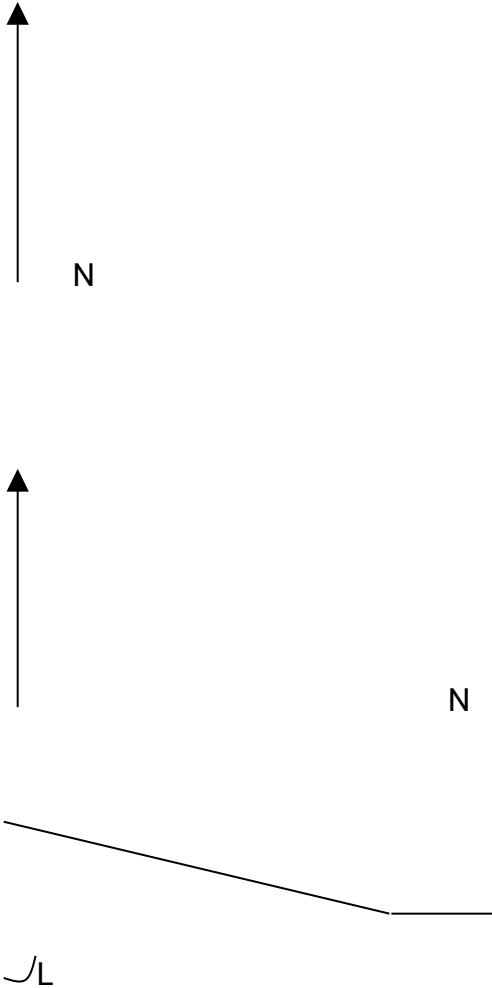
14. Give that  $a = 3$  and  $b = -2$ , find the

blue, 7 are red and the rest black. A pen is picked at random from the box, find the probability that it is a black pen.

value of  $a^2 - b^3$ .

15. Using a pair of compasses, a ruler and a pencil only, construct an angle of  $150^\circ$  in the space below.

16. The diagram below shows the positions of two towns L and M. Use it to answer the questions that follows.



M

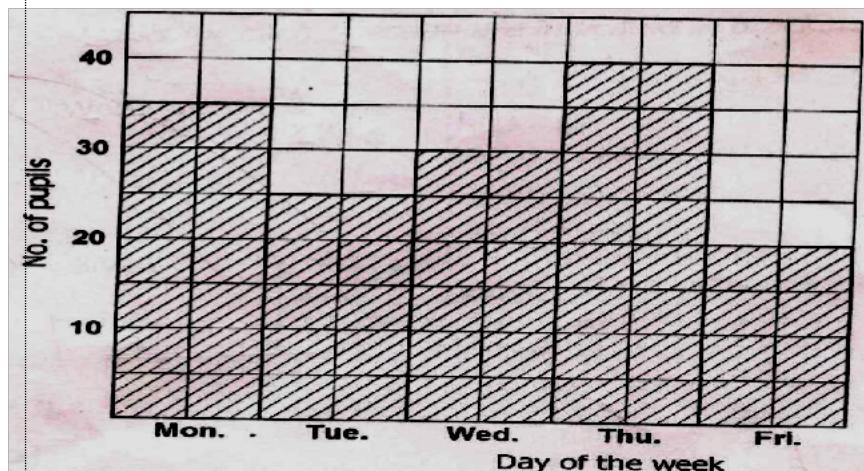
Work out the bearing of town L from town M.

17. Sixty six poles are fixed in a straight line along one side of a road. The poles are fixed at intervals of 10 metres. Calculate the length of the road.

18. A house can be built by 3 men in 20 days. How many men working at the same rate can build the same house in 12 days?

20. Find the least number of sweets when divided among 8 boys or 6 girls equally, leaves 2 sweets as remainder.

19. The graph below shows the number of pupils present in a class of 40 pupils in a certain week. Study it and answer the question that follows.



Find the number of pupils who were absent on Tuesday.

## SECTION B

21. a) Workout:  $3 \ 3 \ 4$  five  
(2mks)

$$\begin{array}{r} + 1 \ 2 \ 3 \\ \hline \end{array}$$

b) Given that  $34t = 112$  four, find the value of t. (3mks)

22. Akot went to the market and bought the following items:-

- 3 litres of milk at sh. 2,400 per litre
- 250g of salt at sh. 2,000 per kg
- 18 oranges at sh. 1,500 for every 6 oranges.

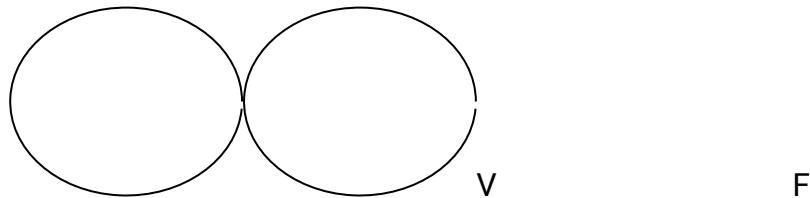
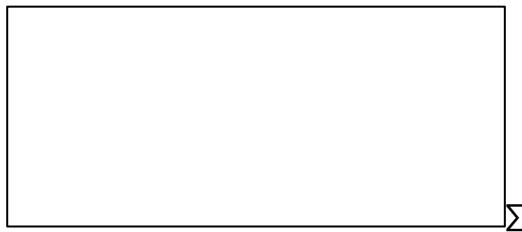
a) Calculate the total cost of the items. (4mks)

b) Akot paid sh. 12,000 for the items. What discount was she given?

23. In a class, 32 pupils play football (F) only, g play both volleyball (V) and football, (2g

- 10) play volleyball but not football while  $(g - 2)$  play neither of the two games.

- a) Complete the venn diagram below using the above information  
(2mks)



$$— \quad g \quad 32$$

—

- b) Given that 62 pupils play one game only, find the value of  $g$ .  
(2mks)

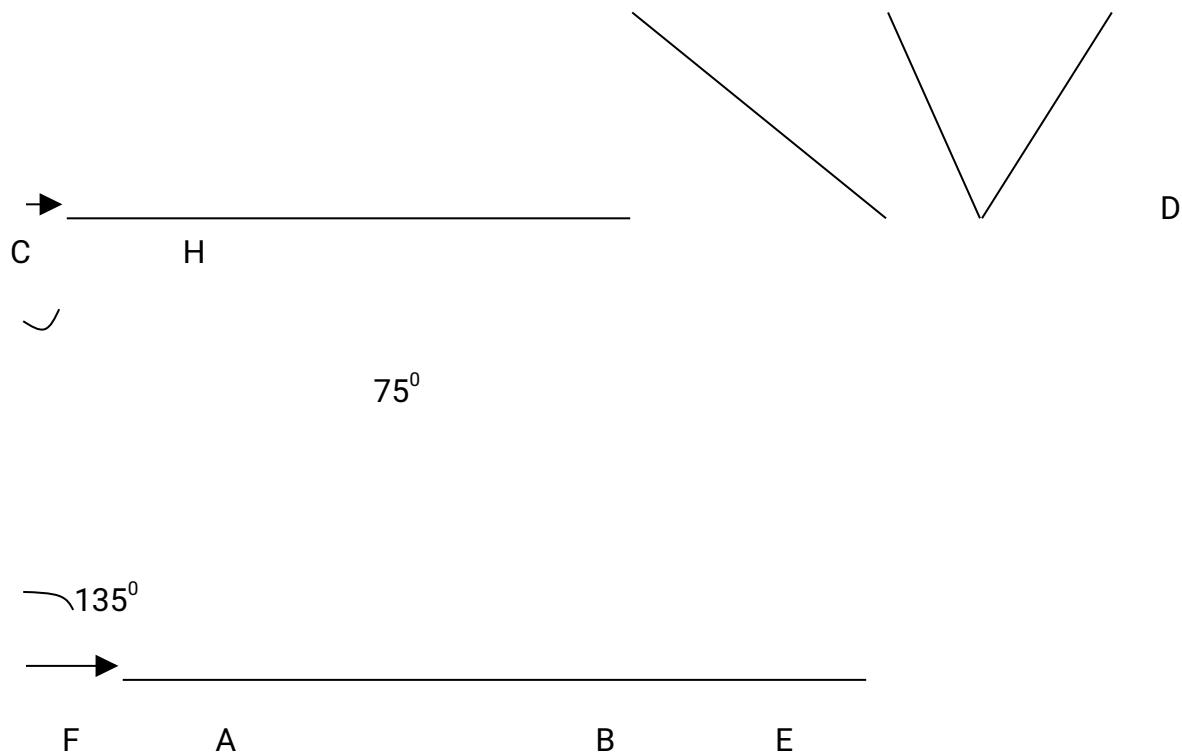
- c) Calculate the number of pupils in the class.  
(2mks)

24. A school bus taking pupils to a game Park covered 75% of its journey in  $1\frac{1}{2}$  hours. The bus travelled at a steady speed of 80 kilometres per hour. Find how far the school is from the Game Park. (4marks)

25. a) Solve the equation:  $\frac{3}{5}n + 6 = 2$   
+ n (3mks)

b) Solve the inequality:  $9 - 2k > k + 3$   
(2mks)

26. In the diagram below, line DH is parallel to FE. Angle ACB =  $75^{\circ}$  and angle CBE =  $135^{\circ}$ . Angle FAD is twice angle DAC. Study the diagram and use it to answer the questions that follow.



a) Calculate the size of angle DAC.  
(3mks)

b) Find the size of angle ADC.  
(2mks)

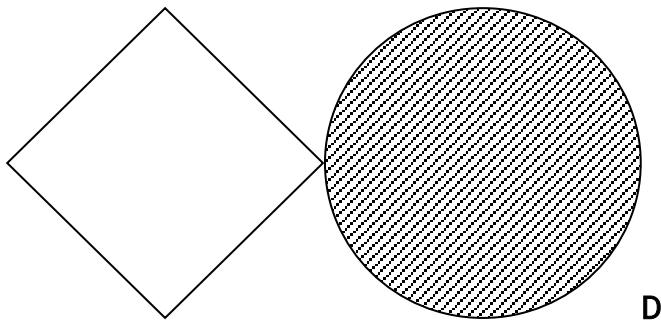
27. Arafat deposited money in a bank which offers a simple interest rate of  $2\frac{1}{2}\%$  per year. After 9 months, his account had an amount of sh. 163,000. Calculate the money Arafat deposited in the bank. (5mks)

28. a) Using a ruler, a pencil and a pair of compasses only, construct a quadrilateral ABCD where line AB = 7cm, angle ABC = BAD =  $60^{\circ}$  and AD = BC = 3.5cm. (4mks)

b) Measure the length DC \_\_\_\_\_ cm  
(1mk)

29. The total mass of tins of honey in a box is 3.25kg. The mass of each tin is 250g. Find the number of tins in the box. (4mks)

30. The diagram below shows a square BCDE enclosed in a circle with centre O and radius 14cm. Parts of the circle are shaded as shown. Study the diagram and use it to answer the questions that follow.



14c ✓

\_\_\_\_\_O. E C

✓

B

a) Calculate the area of the circle.

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

(2mks)

b) Find the area of the shaded part.  
(4mks)

31. In a class,  $\frac{1}{5}$  of the girls are boarder while  $\frac{1}{3}$  of the boys are day scholars. The percentage of the girls in the class is 60%. The class has 10 boys who are day scholars.

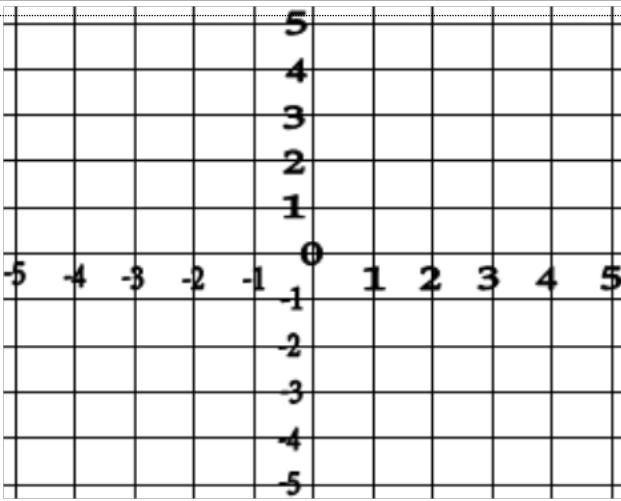
a) How many pupils are in the class? (3mks)

b) Find the number of girls who are boarders.(2mks)

32. Study the coordinate graph below and use it to answer the questions that follow.

y-axis





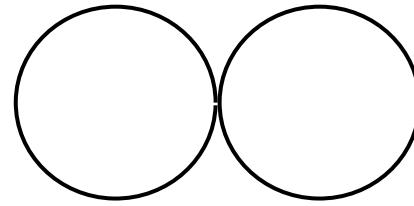
← → x-axis

- a) Write the coordinates of point A (1mk)
  
  
  
  
  
  
- b) Plot the points B (+2, +2) and C (-1, -4) on the graph. (2mks)
- c) Join points A to B and B to C. (1mk)
- d) Locate a point D on the graph, join it to A and C such that ABCD is a kite.

**MATHEMATICS SET FIFTEEN**

1. Subtract:  $194 - 87$

2. Shade the region of  $P - Q$



P

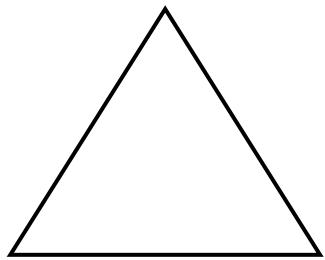
3. Write 159 in Roman

4. Round off 76.753 to the next whole number.

5. Find the average 3, 4 and 5.

6. Solve  $5+p = 13$ .

7. Calculate the value of p



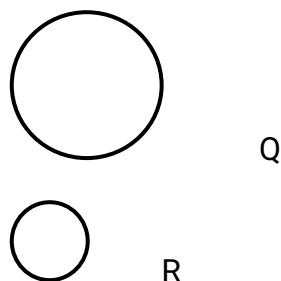
/\ \

$70^0$

8. Express 2:45pm time in 24 hour o'clock.

9. Using the following digits 3,4,5 write down the all even numbers using the digits.

10. Using the venn diagram to complete the statement given after.



\_\_\_\_\_ is a subset of \_\_\_\_\_

11. The average of 7, 2x and 5 is 10.

12. What is the place value of 3 in the

Find the value of x.

number  $321_{\text{five}}$ ?

13. Workout:  $1\frac{1}{2} + \frac{3}{4} \div 1\frac{1}{2}$

14. Complete the abacus below



H T O

H T O

H T O

O =



15. A meeting started at 8:30am and lasted 50 minutes. At what time did it end?

16. Workout:  $\frac{1}{9} \times \frac{3}{5}$

17. The cost of 250g of sugar at sh.3200g per kg.

18. The average of 5 numbers is 20. Find the sum of the numbers.

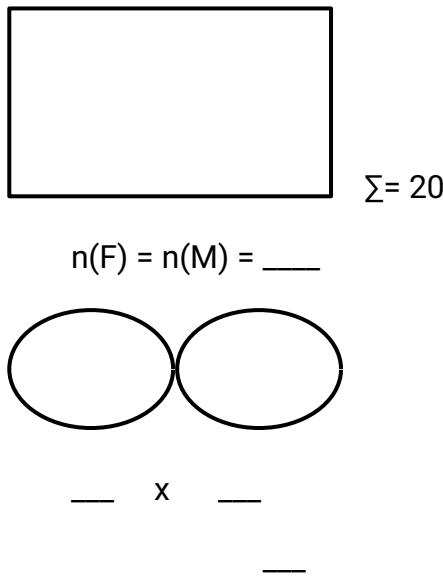
19. Workout:  $4P^3 \div P^2$

20. 12 technicians can paint a school building in 10 days. How long will 15 technicians take?

## SECTION B

21. In a class of 20 pupils, 12 eat fish (F), 15 eat meat (M),  $x$  eat both and 3 eat none of them.

- a) Complete the venn diagram below:-



- b) Find the value of Y

- c) How many pupils ate only one type of food?

22. a) Express  $\frac{5}{8}$  as a decimal fractions

b) Change 0.3636.... as a common fraction.

c) Write 0.245 in words.

23. The average mark of 36 pupils in a class is 5. Two pupils whose marks are 20 and 24 leaves the group. Find the average mark of the remaining pupils.

24. There are 20% more girls than boys in a class;

a) What is the percentage of boys in the class?

b) If there are 60 boys in the class, how many pupils are there altogether?

25. A mother went for Christmas shopping as shown in the table below. Complete the table correctly.

Item	Unit cost	Quantity	Amount
Sugar	Shs. 3000 each kg	3 $\frac{1}{2}$ kg	Shs. 10500
Carrots	Shs. ____ per kg.	2 $\frac{1}{2}$ kg	Shs. 5000
Meat	Shs. 10000 per kg	7 50 g	Shs._ _____
Rice	Sh. 2500	- — kg	Shs. 5000
Salt	Shs. 1200 each kg	3 kg	Shs. _____ -
Total			Shs._ _____

26. The mean score of 6, 9, 7, 4, x, 5 is 0.

a)

b) Find the value of x.

c) Calculate the range of the number.

27. a) If  $66 \frac{2}{3} \%$  of a number is 7200.

Find the number

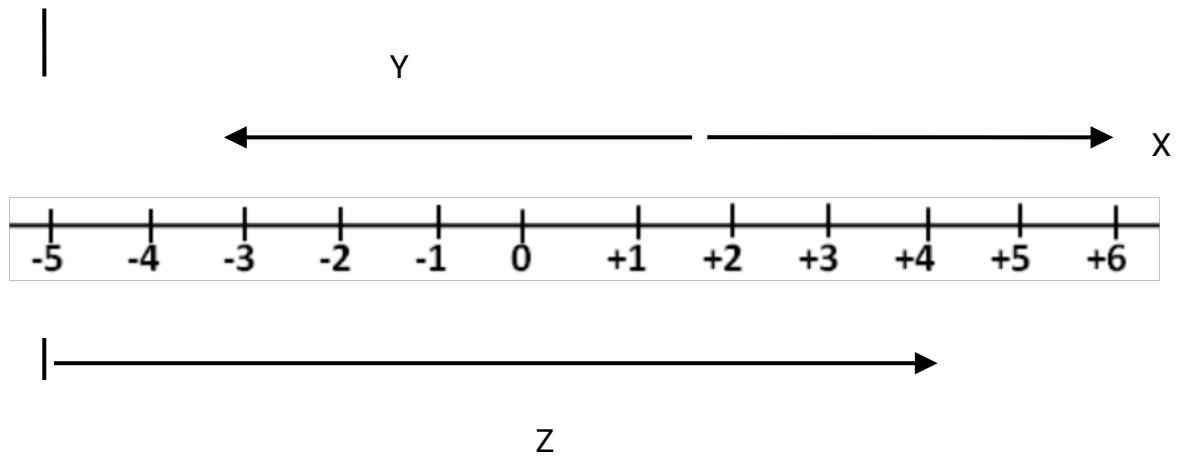
b) Express 0.1222... as a common fraction.

28. a car travelled from Kampala to Jinja at a speed of 120km/hr for  $1 \frac{1}{2}$  h and continued to Iganga at a speed of 80km/hr for 2 hours.

a) Find the distance from Kampala to Iganga.

b) Calculate the speed of the car for the whole journey.

29. Use the number line below to answer the questions that follows



- a) Name the integers marked with the letters

X=\_\_\_\_\_ Y=\_\_\_\_\_ Z=\_\_\_\_\_

- b) Write the Mathematical sentence shown on the number line above?

 a) If  represent 15 balls.  
How many balls are possessed  
by ?

b) If one ball costs sh. 25,000, how much can one pay for the balls represented above?

31. a) The cost of a pen and a book are in a ratio of 4:5. If a pen costs shs. 2500. Find the cost of a book.

b) Increase 1800 in the ratio of 6:5.

c) Increase 8000 by  $12\frac{1}{2}\%$

32. The talk show the marks scored by Peter in 4 subjects, represent Peter's performance on a pie chart. Use a circle of radius 3:5cm.

S u b j e c t	E n g li s h	M a t h s	S ci e n c e	Socia l studie s
M a r k s	6 0	7 0	8 0	90

## MATHEMATICS SET SIXTEEN

1. Find the value of 9 tens and 4 ones.	2. Given that A=(cow, goat). Write down all the subsets.
3. What is the place value of 9 in the number 46.97?	4. There are 4 red pens and blue pens in a pocket a teacher picks one at random. What is the probability that the pen picked is a red one?
5. Simplify: $-4 + -7$	6. Find the GCF of 24 and 16

7. Workout: $10^2 \times 10^1$	8. Round off 9492 to the nearest hundreds
9. Express $\frac{5}{8}$ as a decimal fraction.	10. Express 572 as a roman numerals.
<hr style="border-top: 1px solid black; margin-bottom: 10px;"/> <hr style="border-top: 1px solid black; margin-bottom: 10px;"/>	12. Calculate $3 + 4 \times 5$
11. Divide 17 5984	
13. What is the 12 <sup>th</sup> triangular number?	14. Find the sum of the first 5 composite

numbers.

15. What is the difference between the largest and smallest number that you can write with the following digits 7, 8, 3, 4, 2, 9?

16. List elements in a set of even numbers between 8 and 30.

17. The sum of three consecutive counting numbers is 36. What are these numbers?

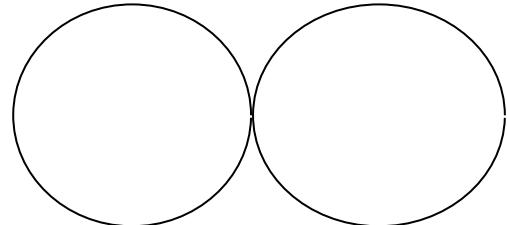
18. What is the sum of the 3<sup>rd</sup> and the 7<sup>th</sup> prime number.

19. Given that prime factors of 90 are  $2 \times 3 \times 3 \times k$ . Find the value of k.

20. Find the value of  $2^3 + 3^2 + 5^0$ .

## SECTION B

21. Study the venn diagrams and answer the questions



$3_2$        $x$   
 $2_2$   
 $3_1$     $2_1$

a) Find the value of

i)  $x$

ii)  $y$

b) Find the GCF and LCM of 80 and y.

22. a) Simplify:  $0.72 \times 0.6$

$$0.12 \times 0.3$$

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

c) From a roll of 10 metres a tailor makes a shirt using  $1\frac{1}{4}$  metres each. How many shirts does the tailor make?

23. In a class of 180 pupils,  $\frac{2}{5}$  of them were sent home school fees and the rest had paid fee.

a) What fraction of pupils had not paid fees at the time?

b) How many more pupils have paid than those who were sent?

24. A trader borrowed shs. 500,000 from a bank at an interest rate of 10% per annum.

- |  |   |
|--|---|
| a) How much did he pay after 6 months? | b) How much interest must he pay after 2 $\frac{1}{2}$ years? |
|--|---|

25. There are 40% more girls than boys in a class.

- |   |  |
|---|--|
| a) What percentage are boys in the class? | b) How many pupils are there in the class? |
|---|--|

- |  |
|--|
| c) If there are 21 girls in the class, how many pupils are there in the class? |
|--|

26. 12 women can do a piece of work in 5 days.

a) How many women are required to do the same job in 6 days.

b) How long will 15 women take to do the same piece of work?

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

Age in years	10	11	12	13	14	15
No. of pupils	2	15	14	4	4	1

a) What is the modal age?

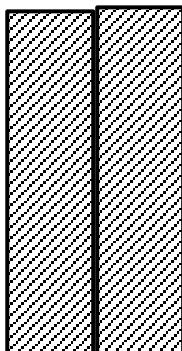
b) Find the median age.

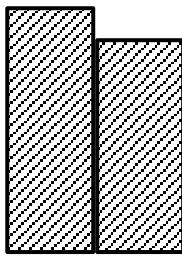
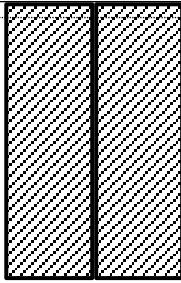
c) Find the range

d) Calculate the mean age.

28. The graph shows the number of pupils in a school. Study it carefully and answer the questions below

50  
40  
30  
20  
10  
0





P 2    P 3    P 4    P 5    P 6

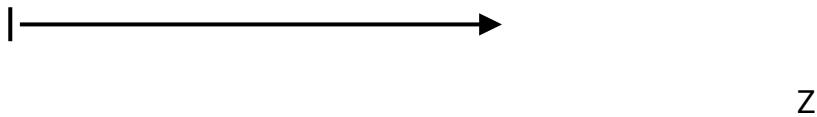
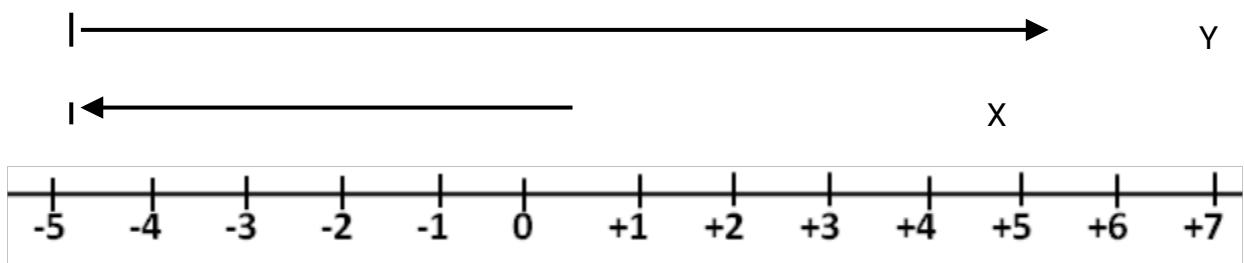
a) What is the modal age?

b) Find the median age.

c) Find the range.

d) Find the mean.

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



a) Name the integers marked by letters

X \_\_\_\_\_

Y \_\_\_\_\_

Z \_\_\_\_\_

b) Write the Mathematical statement shown on the number line shown above.

30. Amos has bank notes numbered from AP004300 to AP004399.

a) The bill below was prepared by Magalu to buy items from a shop. Study it carefully and find the missing parts.

Item	Quantity	Unit cost	Total
Rice	3kg	Sh. 2800 each kg	

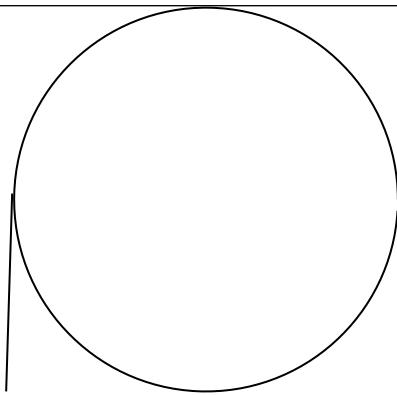
M e at	2 $\frac{1}{2}$ kg	Shs. _____	Sh. 25000
S u g a r	_____ kg	Shs. 3200 per kg	Sh. 9600
B a n a n a	_____ bunch	Shs. 15000	Sh. 15000
T o t a l			Shs. _____ -

b) Find the balance of Mugalu if he went to shop with sh. 50,000.

31. a) How long will it take a bus to cover a distance of 120km at 40km/hr?

b) A car moving at 120km/hr take 20 minutes to cover the journey. How long is the journey?

32.



The pie chart shows how a family spent shs 120,000/=

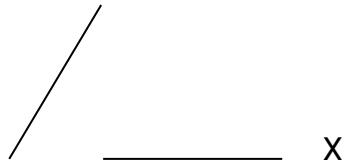
a)

Find the value of Y.

b) How much is spent on fees?

Saving

Food



Fees

$120^0$

c) Express sector for food as percentage.

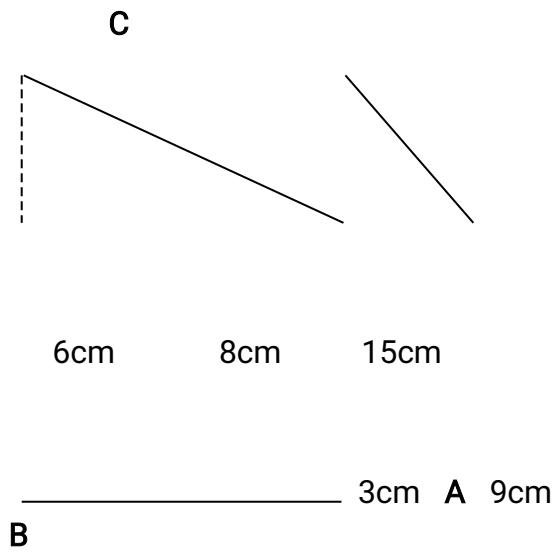
## MATHEMATICS SET SEVENTEEN

1. Multiply  $204 \times 15$ .

2. Given that  $A = \{1, 2, 5, 6, 7\}$  and  $L = \{2, 3, 4, 5, 8\}$ . Find the number of subsets in set  $A \cap B$ .

3. Decrease 460 by 30%

4. In the figure below, find the area of triangle ABC.



5. Workout:  $7 + 5 \times 3$

6. Change 1450hrs to 12 hour o'clock system.

7. The price of a radio is sh. 430,000 and shopkeeper sold it at sh. 412800. Calculate the percentage loss.

8. Convert  $12\frac{1}{2}\%$  as a common fraction in its lowest form.

9. What is the smallest number which when divided by 9 or 12 leave no

10. Multiply:  $124_{\text{five}} \times 4$

remainder.

11. Express 0.122... as a common fraction in its lowest form.

12. 6 porters can dig a piece of land in 5 days, how many days will 15 porters take to do the same piece of work?

13. Simplify:  $\frac{1.2 \times 0.06}{0.004}$

14. Simplify:  $(3 \frac{1}{2} \div 2 \frac{1}{2}) \times 2 \frac{2}{3}$

15. Workout:  $2^2 \times 2^3$

16. The LCM of two numbers is 60 their GCF is 6. If one of the number is 12. Find the second.

17. Find the simple interest of sh. 120,000 for 6 months at 5% interest per year.

18. The mean of 5 numbers is 4. Find the sum of 5 numbers.

19. Study the clock below and use it to tell the morning time



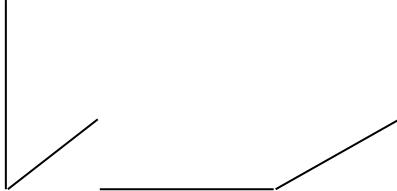
20. Increase sh. 45000 in the ratio of 4:3.



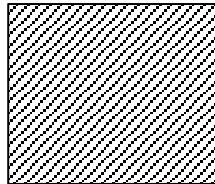
## SECTION B

21. Given that the total surface area of a cube below is  $384\text{cm}^2$ . Use it to answer questions that follows

a)



Find the length of each side.



b) Find the volume of the cube.

102

INTERNAL EXAMINATIONS BOARD OF TILDA AND PAUL P/S.

P.O.BOX 43, ENTEBBE – MPALA  
TEL: 0782634937/0754056534

c) Calculate area of the shaded part



Edit with WPS Office

22. A family spent 40% more on school fees than clothing.

a) What percentage was spent on clothing?

b) If the family spend sh. 100,000 on clothing, what is the family total expenditure?

23. a) The sum of three consecutive odd numbers is 93. If given that  $x$  is the second number. Find the value of  $x$ .

b) What is their median?

24. Mwesigwa shared sh. 480,000 in his three children; Muwanga, Nakamatte and Babirye

in the ratio of 4:3:5 respectively

a) How much money did each child get?

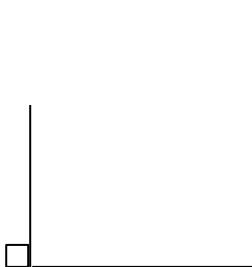
b) How much more money did Babirye get than Nakamatte?

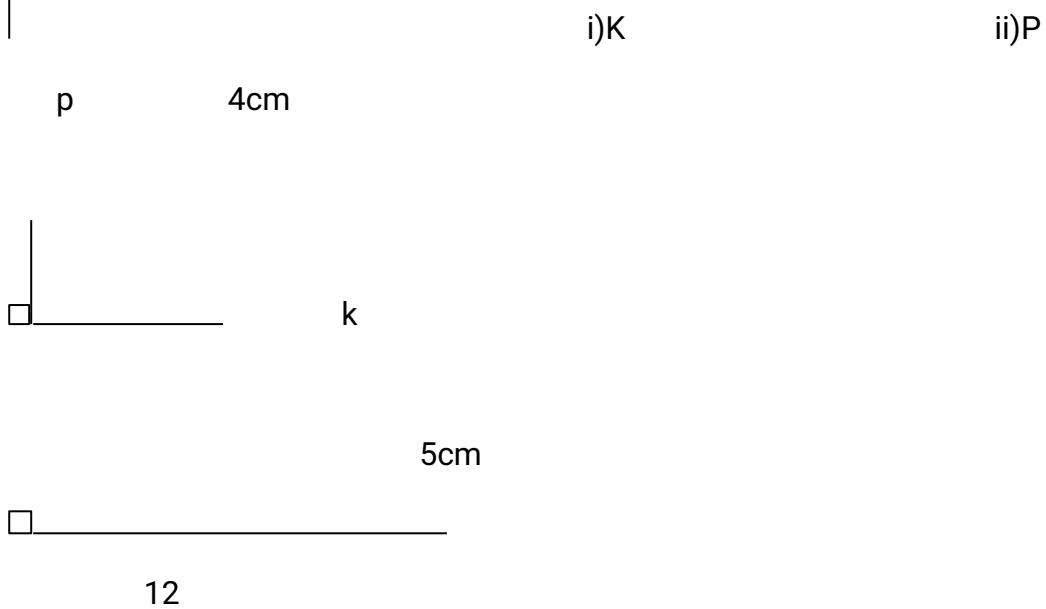
c) What fraction of money was given to Muwanga?

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

7cm

a) Find the value of;

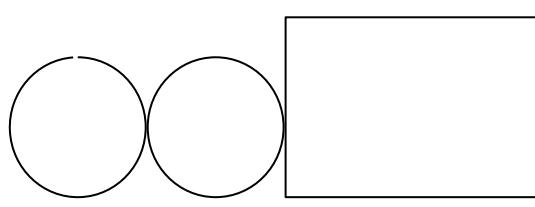




- |                                |   |
|--------------------------------|---|
| b) Find the area of the figure | c) Calculate the perimeter of the figure. |
|--------------------------------|---|

26. In a class of 60 pupils, 36 pupils like Science, 20 pupils like English and 10 do not like any of the subjects.

- |   |                                       |
|---|---------------------------------------|
| a) Show the above information on a venn diagram | c) How many pupils like only English? |
|---|---------------------------------------|



c) What is the number of pupils who like one subject only.

d) If one pupil is elected a class monitor, what is the probability that a pupil who like English only is chosen?

27. In a class of 90 pupils,  $\frac{1}{3}$  of them have pens,  $\frac{1}{4}$  of the remainder have pencils and the rest have books.

a) Find the number of pupils who had the books.

b) How many pupils have pencils?

c) How many pupils have pens?

28. Given that  $202_k = 52_{\text{ten}}$ . Find the value of K.

b) Convert  $101_{\text{two}}$  to base five

c) Express  $232_{\text{four}}$  to decimal base.

29. a) Express  $\frac{3}{4}$  as a common decimal.

b) Convert 0.1212... as a common fraction

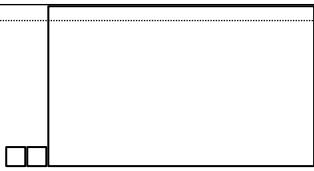
30. a) Sarah has 400 more chicken than John their total number of chicken is 2000. How many chicken does each have?

b) Mbidde is twice as old as his sister. Their total age is 48 years, how old is his sister?

31. In the rectangle ABCD below find;

| (2x + 4) cm

i) Find the value of x.



3cm



(x+6)cm

ii) Actual length and width

iii) Find the perimeter of the rectangle.

32. The mean age of 3 boys is 14 years. Two of the boys are 13 years and 15 years respectively. Calculate the age of the third boy .

## MATHEMATICS SET EIGHTEEN

1. Solve $3^x \div 3^2 = 27$	2. Use distributive property to work out; $(448 \times 37) - (37 \times 148)$
3. Write sh. 120,580 in words.	4. In a school of 480 pupils, 280 play football and 440 play volley. How many pupils play both?
5. Multiply: $2.23 \times 2.5$	6. $\frac{2}{3}$ of the books in the bookshop are school text books. How many books are in the bookshop altogether if the text books are 240?

7. If 40% of the class are absent,	8. The marked price of a book is sh. 4000. If a customer is offered a 10% discount.
9. Calculate the rate of interest if sh. 30,000 can yield a simple interest of sh. 1125 in 9 months.	10. The average make of 4 girls is 30 marks and if the fifth girl joins the average becomes 25. Find the score for the fifth girl.

11. Given the number 0.475

a) Write the number in standard form

b) Expand the number using powers of ten

c) Find the sum of the value of 4 and 5.

12. The table below shows arrival and departure time for a bus from Kampala to Iganga, Study it and answer questions that follow.

Town	Arrival	Departure
Kampa la		0845hrs
Kawolo	0930hrs	0935hrs

Jinja	1000hrs	1015hrs
Bulanga a	1045hrs	1100hrs
Iganga	1215hrs	

a) For how long does the bus take to travel from Kawolo to Bulanga?

b) How long does the bus take at Jinja park?

c) If a bus traveled at an average speed of 40km/hr from Jinja to Bulanga, find the distance between the two towns.

13. Given that 81 dollar = ugsh. 2200 and 1ksh = ugsh 30. How much Uganda shilling can be changed for;

i) 200 US dollar

ii) 4600 Kshs.

14. Complete the table below by showing the working in the space provided below

Item	Quantity	Unit price	Total cost
Loaves of bread	3 loaves	Shs. _____	Shs. 12,000
Meat	_____kgs	Shs. 8,000 @ kg	Shs. 20,000
Soap	4 bars	Shs. _____ a bar	Shs. 15,200
Salt	1 ½ kg	Shs. 1200 a kg	Shs. _____
		<b>Total</b>	Shs._____

If Amos was given a discount of 10% for cash payment, how much money did he pay to the

shopkeeper?

15. Using a pencil, a ruler and a pair of compasses only,
- a) Construct a triangle RST where ST = 5cm LS =  $120^{\circ}$  and angle T =  $30^{\circ}$ , drop a perpendicular line from K to meet ST at Y.

b) Measure line  $\overline{RY}$

## MATHEMATICS SET NINETEEN

1. Find the value of 4 tens + 9 ones.	2. What is the reciprocal of $\frac{2}{5}$ ?
3. Find the cube root of 216.	4. Find the sum of next two numbers in the sequence 1, 3, 6, 10, ___, ___

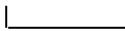
5. Convert 51ten to base four.	6. Find the LCM of 12 and 16
7. The sum of three consecutive counting is 18. Find the numbers.	8. Find the perimeter of the square whose area is $64\text{cm}^2$ .
9. Work out: $\frac{3}{4} \div \frac{3}{2} =$	
10. Study the figure below and answer the questions	

Find the perimeter of the figure. \_\_\_\_\_

— 7cm —



—



11. Divide  $1414 \div 7$

12. The mean of three consecutive even numbers is 30. Find the numbers.

13. Find the sum of 8<sup>th</sup> and 11<sup>th</sup> triangular.

14. Add using dial  $4+2 = \underline{\hspace{2cm}} \pmod{5}$

15. Find the diameter of a circle whose radius is 7cm

16. Find the angle made in  $\frac{4}{5}$  revolutions.

17. Use the number line to add  $+4 + 2$

18. Simplify:  $2.3 + 2.4$   
 $3.4 - 2.1$

19. Multiply:  $0.25 \times 10$

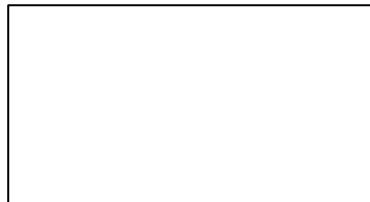
20. What is 25% of sh. 120,000?

## SECTION B

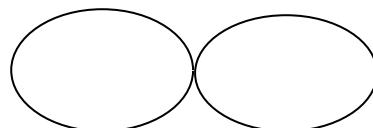
21. In a class of 50 pupils, 33 pupils like Mathematics (M), 32 pupils like science (S), some pupils like both subjects while 5 pupils like neither of the subject.

- a) Complete the venn diagram below:-

$$n(\Sigma) = \underline{\hspace{2cm}}$$



$$n(M) = \underline{\hspace{2cm}} \quad n(E) = \underline{\hspace{2cm}}$$



— y —

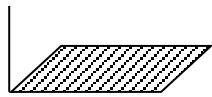
—

b) How many pupils like only one subject?

c) What is the probability of picking a pupil to lead others who do not like Mathematics?

22. Study the figure and use it to answer the questions that follows

a) Find the area of the shaded part.



b) Calculate the volume



5cm

4cm

6cm

c) Find the total surface area of the figure above.

23. Annet is 12 years older than Peter. If their total age is 50 years.

a) How old is each now?

b) How old will Peter be in 10 years?

24. Arrange the following fractions in a scending order;  $\frac{1}{6}, \frac{2}{3}, \frac{1}{4}, \frac{2}{5}$

25. In a class of 120 pupils,  $\frac{1}{3}$  of the pupils use blue pens and the rest use black pens.

a).What is a fraction of pupils who are using black pens?

b).If those who use blue pens each has five blue pens. Find the total number of blue pens they have?

26. Wandera drove his car from town A to town B at a speed of 60km/hr for 2 hours and another 3 hours from town B to town C at the same speed.

a) How far is town B from A?

b) How far is town C from B?

c) Calculate the average speed for the whole journey.

27. Given that  $a = b = 3$  and  $c = 2$ . Find the value of;

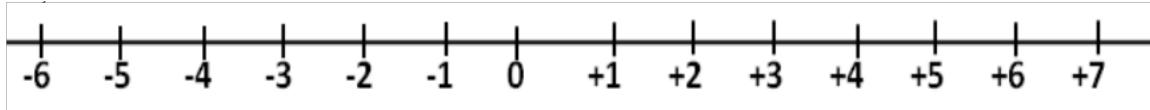
a)  $2ab - 3c$

$ac$

b)  $2b^2 + c$

28. Study the number line below and answer the questions that follow





i) Name the integers marked letters

a\_\_\_\_\_ b\_\_\_\_\_ c\_\_\_\_\_

ii) Write the Mathematical statements shown on the above number line

29. Anna, Shafia and Hamuza shared money in ratio of 8:13:19 respectively. If Hamuza got sh. 190,000.

a) How much money did they share altogether?

30. Using a ruler, a pair of compasses, construct a regular pentagon in a circle whose radius is 3.5cm.

31. Use the number 467.32 to answer the questions that follow

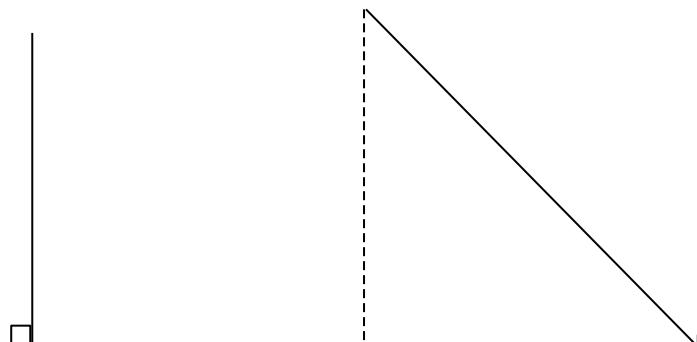
a) Write the above numeral in words.

b) Find the product of the value of 6 and 7

c) Find the difference between the value of 4 and the value of 6.

32. The figure below shows Mr. Kato's compound.

15m



17m

□

8m

a) Find the perimeter of Kato's compound

b) Calculate the area of Kato's compound.

### MATHEMATICS SET TWENTY

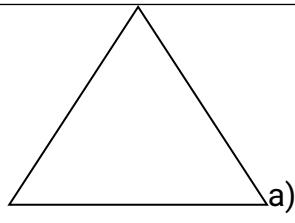
1. Divide  $0.24 \div 8$

2. Change 30 minutes to hours

3. Find the square root of 0.49

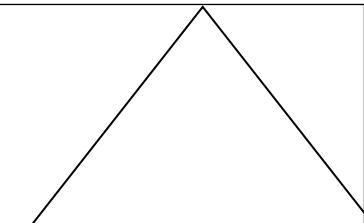
4. 6 men can do a piece of work in 5 days. How many men is needed to do the same piece of work in 10 days?

5. Find the value of  $y$ .



$\wedge$

$60^{\circ}y$

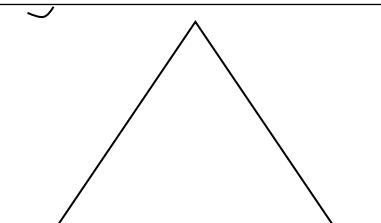


b)

$\wedge$

$\nwarrow$

$70^{\circ}y$



c)

$70^{\circ}$

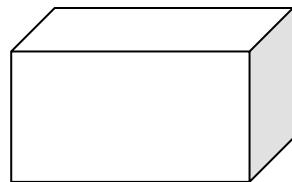
$\nwarrow$

$80^{\circ}y$

6. The sum of three consecutive odd numbers is 450. Find the numbers.

7. Express 0.888... as a common fraction in its lowest term.

8. Find the total surface area of the figure below



7cm

9cm

8cm

9. a) Simplify,  $0.6 \times 1.8$

0.2

b) Simplify:  $7.5 - 0.6$

10. Given that  $n(A) = 20$ ,  $n(B) = 25$  and  $n(A \cap D) = 12$ . Show the information on a venn diagram and find  $n(A \cap B)$ .

11. Construct an angle of  $120^\circ$  in the space provided below.

12. Expand 1245 using powers of tens.

13. Find the reciprocal of  $\frac{3}{8}$ ?

14. Share 360 in the ratio of 3:2.

15. Workout  $(2 \times 17) + (13 \times 2)$

16. In a box, there are 4 blue pens and 9 Red pens. What is the probability that one pen is pulled at random is Red pen?

17. Convert 2 litres to ml.

18. Simplify:  $2^3 \times 2^2$   
 $2^3$

19. The LCM of two numbers is 48 and their GCF is 4. If one of the number is 12. Find the second number.

20. Workout  $\frac{1}{2}$  of  $(15 \div 3)$

## SECTION B

21. Workout:  $0.36 \times 7.5$

$$1.09 \times 1.5$$

b) Simplify  $\frac{1}{3} - \frac{1}{2} + \frac{3}{4}$

22. The average of 7, x, 3, 9, 8 and 10 is 80.

a) Find the value of x.

b) Find the range of the numbers

c) Find the median

23. a) Simplify  $9h + 3k - 4h - k$

b) Solve  $4x - 3 = x + 6$ .

24. A bus left town A at 9:50am and reached town B at 11:50am. If the distance between town A and town B was 138km.

c) How many hours did the bus take to cover the distance?

d) Calculate the speed of a bus between town A and town B.

25. a) What is the place value of 5 in the number 45.964?

b) Which number has been expanded to give;

$$(6 \times 10^3) + (4 \times 10^{-2}) + (5 \times 10^1) + (3 \times 10^{-1}) + (9 \times 10^0)$$

26. a) Increase sh. 160,000 by 20%

b) Decrease 400kg by  $12\frac{1}{4}\%$

e) Decrease 900 by 3:2

27. Global Junior Primary School has two bells, which ring in intervals of 30 minutes and 40 minutes for lower and upper primary respectively. If both bells were rung at 10:00am. At what time will the two bells ring together again.

28.

Currency	Buying rate	Selling rate
1 pound sterling(E)	Ug.sh. 4200	Ug. Sh. 4250
1 US dollar (U\$)	Ug. Sh 3500	Ug.Shs. 3600
1 Kenya shilling (Ksh)	Ug. Shs 29	Ug Sh. 30
1 Euro	Ug. Shs. 3200	Ug.Sh. 3300

- b) A tourist arrived in Uganda with \$150. How much in Uganda shilling will get?

c) Moi wants to buy a television in Kenya shillings. If the cost of a TV in Ug. Shs. 480,000. How much in Kenya shilling will he get?

d) Tamu has euros equivalent to Uganda sh. 12,480,000. Find how much is Euros Tamu will get?

29. Okot bought the following items from the market;

- 3kg of sugar at sh. 3400 per kg
- 1 ½ kg of rice at sh 3600 per kg
- 1500gm of maize flour ast shs. 3,000
- 8 mangoes at shs. 500 each

a) What is the cost of a kg of maize flour?

b) Calculate his total expenditure

c) Find his change if he had shs. 30,000.

30. a) By what percentage will 480 be increased to 540?

b) A book was bought at sh. 8000 and was sold at sh. 9000. Calculate the percentage loss

c) Calculate the percentage loss of cost price is sh. 5800 and selling price is sh. 5000.

31. a) Express 72km/hr to m/s

b) A bus takes 6 hours to cover a distance at 80km/hr but it returns in only 4 hours. Calculate its average speed for the whole journey.

### MATHEMATICS SET TWENTY ONE

#### SECTION B

1. Subtract 5 from 14  
"Two thousand sixteen"

2. Write in figures.

3. Solve:  $12 = 3 + 3y$

4. Simplify  $+8 - - 3$

5. Given that set  $P = \{ b, r, e, a, d \}$   
 $Q = \{ b, u, t, e, r \}$  Find  $n(P \cap Q)$

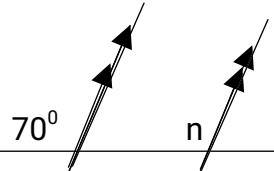
6. Express 1000<sub>two</sub> in decimal base.

7. A taxi travelled at a speed of 90km/hr  
and covered a distance of 135km.  
What time did the journey take?

8. Work out:  $12 + (9 \div 3)$

9. Simplify:  $2\frac{1}{2} + \frac{1}{4}$

10. Find the value of  $n$ .



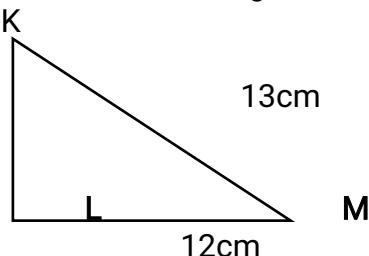
11. Find the next number in the series.  
1, 3, 6, 11, 18, \_\_\_\_\_

12. State the place value of 1 in the  
number. 257.314

13. The cost of 4 books is sh. 3200. How  
many books can be bought with sh. 800?

14. John walked a distance of 2.3km.  
Express his distance in metres.

15. Find the length KL



16 Using the distributive property,  
workout  $(30 \times 12) + (70 \times 12)$

17. A certain number of sweets was shared among 4 girls and 6 girls leaving a remainder of 1 sweet. How many sweets were shared?

18.

Expand using place values 3682

19. Express XCIX in Hindu Arabic numerals.

20.  
only, and a sharp pencil, construct an angle of  
 $75^{\circ}$ .

Using a ruler, a pair of compasses

21. In a class, 20 pupils like Rice (R), 25 pupils like Chips (C) while 10 pupils like both Rice and Chips.

a) Represent this information on a venn diagram.

( 3 marks)

### SECTION B

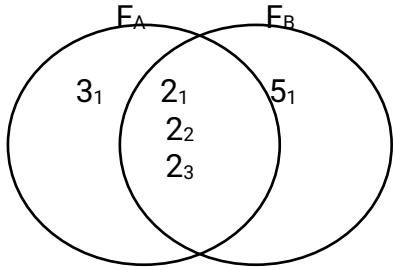
b) Find the total number of pupils in the class. ( 1 mark)

c) How many pupils like only one type of food? ( 1 mark)

22. a) During the presidential elections, a candidate received 10,411 votes from county A, 12242 from B, 8, 211 from C, 9001 from D and 1400 from E. How many votes did he get from the district? ( 3 marks)

b) The reading of the water metre at the beginning of the month was 0040702 units and at the end of the month was 0040731units. How much water was used during the month? ( 2 marks)

23. Given the venn diagram below, use it and answer the questions that follow.



a) Find the value of B ( 2 marks)

b) Find the GCF of A and B ( 1mark)

c) Find the LCM of A and B ( 2 marks)

24. At a birthday, Jane Isabella and Daniella contributed some money in the ratio of 3: 2: 5 respectively. If Daniella contributed shs. 48,000.

a) What was their total contribution? ( 3 marks)

b) What was Jane's contribution? ( 2 marks)

25. a) Simplify  $\frac{0.49 \times 1.8}{0.07 \times 0.6}$  ( 3 marks)

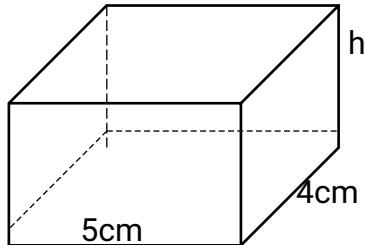
b)  $\frac{3}{4} + \frac{1}{2} \div \frac{5}{6}$  ( 2 marks)

26. The sum of three consecutive odd numbers is 69 ( 2 marks)  
a) Find the numbers.

b) Work out their range. ( 3 marks)

27. The figure below is a rectangular tin whose volume is  $120\text{cm}^3$ .

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



b) Work out its total surface area. ( 3 marks)

28. a) Solve:  $2(3k + 2) + 5(k+3) = 41$  ( 3 marks)

b)  $3x + 7 = x + 9$  ( 2 marks)

29. Okiring went to the market and bought the following items.

*2 ½ kg of meat at shs. 10,000 per kg*

*1 ¼ kg of rice at shs. 3600 per kg*

*2 litres of cooking oil at 3,000 per litre*

*500gm of salt at sh. 1200 per kg.*

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

b) If he remained with sh. 2,000, how much money did he go with? ( 1 mark)

30. Nattabi scored the following marks in a series of tests. 7, 5, 4, 10, 6, 5, 6, 7, 5, 5

a) Find the modal mark. (2marks)

b) Work out Nattabi's median mark. ( 1 mark)

c) Calculate her mean mark.

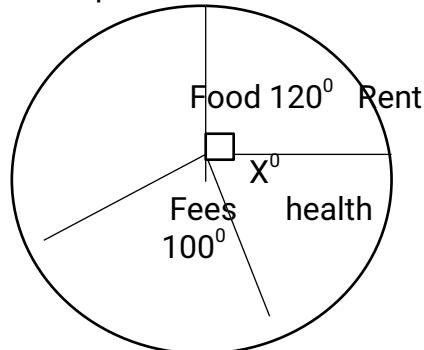
( 2 marks)

31. Using a ruler, sharp pencil and a pair of compasses only, construct a triangle ABC in which  $AB = AC = 6\text{cm}$  and angle B is  $90^\circ$ .

b) Measure AC

32. The pie chart below shows how a man spends his monthly income of shs. 720,000.

a) Find the value of  $x$



b) How much money does he spend on fees?

c) Express the amount of money spent on food as a percentage of the total amount.

## MATHEMATICS SET TWENTY TWO

### SECTION B

1. Subtract 5 from 14  
"Two thousand sixteen"

2.

Write in figures.

3. Solve:  $12 = 3 + 3y$

4. Simplify  $+8 - - 3$

5. Given that set  $P = \{ b, r, e, a, d\}$   
 $Q = \{ b, u, t, e, r\}$  Find  $n(P \cap Q)$

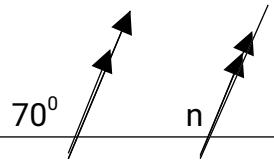
6. Express 1000<sub>two</sub> in decimal base.

7. A taxi travelled at a speed of 90km/hr  
and covered a distance of 135km.  
What time did the journey take?

8. Work out:  $12 + (9 \div 3)$

9. Simplify:  $2\frac{1}{2} + \frac{1}{4}$

10. Find the value of n.



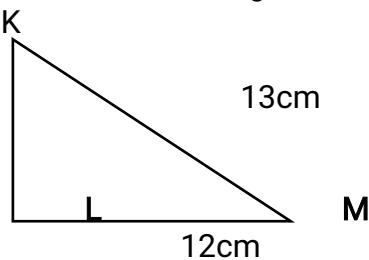
11. Find the next number in the series.  
1, 3, 6, 11, 18, \_\_\_\_\_

12. State the place value of 1 in the number. 257.314

13. The cost of 4 books is sh. 3200. How many books can be bought with sh. 800?

14. John walked a distance of 2.3km. Express his distance in metres.

15. Find the length KL



16

Using the distributive property,  
workout  $(30 \times 12) + (70 \times 12)$

17. A certain number of sweets was shared among 4 girls and 6 girls leaving a remainder of 1 sweet.

18.

Expand using place values 3682

How many sweets were shared?

19. Express XCIX in Hindu Arabic numerals. 20. Using a ruler, a pair of compasses only, and a sharp pencil, construct an angle of  $75^{\circ}$ .

### SECTION B

21. In a class, 20 pupils like Rice (R), 25 pupils like Chips (C) while 10 pupils like both Rice and Chips.

a) Represent this information on a venn diagram. ( 3 marks)

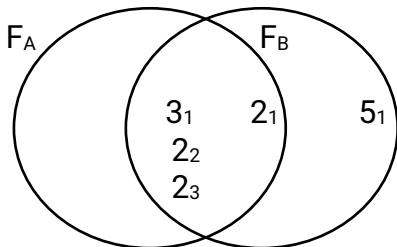
b) Find the total number of pupils in the class. ( 1 mark)

c) How many pupils like only one type of food? ( 1 mark)

22. a) During the presidential elections, a candidate received 10,411 votes from county A, 12242 from B, 8, 211 from C, 9001 from D and 1400 from E. How many votes did he get from the district? ( 3 marks)

b) The reading of the water metre at the beginning of the month was 0040702 units and at the end of the month was 0040731units. How much water was used during the month? ( 2 marks)

23. Given the venn diagram below, use it and answer the questions that follow.



a) Find the value of B ( 2 marks)

b) Find the GCF of A and B ( 1mark)

c) Find the LCM of A and B ( 2 marks)

24. At a birthday, Jane Isabella and Daniella contributed some money in the ratio of 3: 2: 5 respectively. If Daniella contributed shs. 48,000.

a) What was their total contribution? ( 3 marks)

b) What was Jane's contribution? ( 2 marks)

25. a) Simplify  $\frac{0.49 \times 1.8}{0.07 \times 0.6}$  ( 3 marks)

b)  $\frac{3}{4} + \frac{1}{2} \div \frac{5}{6}$  ( 2 marks)

26. The sum of three consecutive odd numbers is 69 ( 2 marks)

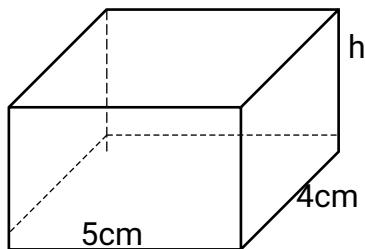
a) Find the numbers.

b) Work out their range. ( 3 marks)

27. The figure below is a rectangular tin whose volume is  $120\text{cm}^3$ .

a) Find the value of  $h$ .

( 2 marks)



b) Work out its total surface area.

( 3 marks)

28. a) Solve:  $2(3k + 2) + 5(k+3) = 41$   
marks)

( 3

b)  $3x + 7 = x + 9$  ( 2 marks)

29. Okiring went to the market and bought the following items.

*2  $\frac{1}{2}$  kg of meat at shs. 10,000 per kg*

*1  $\frac{1}{4}$  kg of rice at shs. 3600 per kg*

*2 litres of cooking oil at 3,000 per litre*

*500gm of salt at sh. 1200 per kg.*

d) How much money did he spend altogether?

( 4 marks)

e) If he remained with sh. 2,000, how much money did he go with? ( 1 mark)

30. Nattabi scored the following marks in a series of tests. 7, 5, 4, 10, 6, 5, 6, 7, 5, 5  
a) Find the modal mark. (2marks)

b) Work out Nattabi's median mark. ( 1 mark)

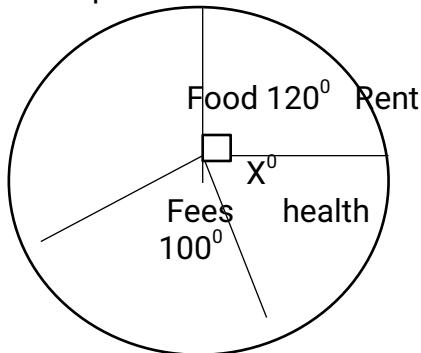
f) Calculate her mean mark. ( 2 marks)

31. Using a ruler, sharp pencil and a pair of compasses only, construct a triangle ABC in which AB = AC = 6cm and angle B is  $90^{\circ}$ .

b) Measure AC

32. The pie chart below shows how a man spends his monthly income of shs. 720,000.

a) Find the value of  $x^{\circ}$



b) How much money does he spend on fees?

c) Express the amount of money spent on food as a percentage of the total amount.

**MATHEMATICS SET TWENTY THREE  
SECTION A: 40 MARKS**

1. Work out:  $621 \div 3$

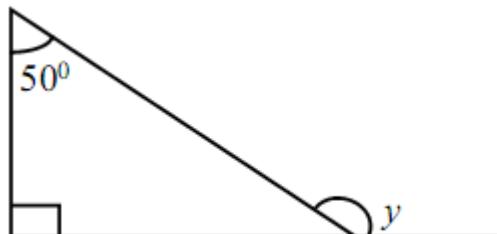
2. Write "Four hundred nine" in Roman numerals.

3. Simplify:  $3(a - 4) - 2(a + 5)$

4. Twelve litres of milk were given to some children. If each child got  $\frac{3}{4}$  of a litre of milk, how many children got the milk?

5. The LCM of two numbers is 60 and their GCF is 3. If one of the numbers is 15, find the second number.

6. Find the size of angle  $y$  in the figure below.



7. Andrew deposited sh. 600,000 in the bank that offers an interest rate of 3% per year for  $1\frac{1}{2}$  years. Find the interest earned by Andrew.

8. Change 25 m/s into km/hr.

9. A mathematics lesson ended at 1: 25 pm. If it had lasted for  $1\frac{3}{4}$  hours, at what time did the lesson start?

10. In the space below, construct an angle of  $150^{\circ}$ .
11. Show 134six on the abacus.
12. Increase sh. 4000 by  $12\frac{1}{2}\%$ .
13. If today is Thursday. What day of the week was it 33 days ago?
14. Find the sum of the next two numbers in the sequence below;  
1, 2, 5, 10, 17, \_\_\_\_\_, \_\_\_\_\_.
15. Find the range of -9 and -5.
16. Solve:  $5 - 3x = 17$
17. Work out:  
 $5\frac{3}{4} \div 2\frac{1}{4}$
18. Calculate the radius of the circle whose circumference is 88 m.

(Take  $\pi$  as  $\frac{22}{7}$  ).

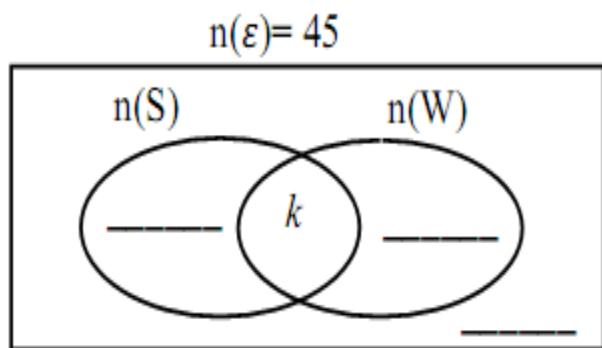
19. If 5 men take 4 days to paint the house, how many more days will 2 men take to paint the same house?

20. If R has 63 proper subsets, find  $n(R)$ .

### **SECTION B: (60 MARKS)**

21. In a party of 45 guests, 30 drink soda (S), 20 guests drink water (W), k drink both soda and water while 4 guests do not drink any of the two drinks.

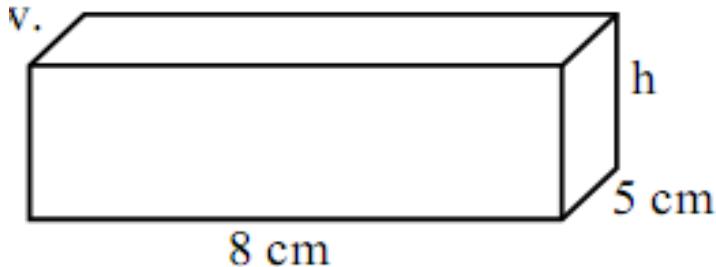
a) Complete the Venn diagram below. (3marks)



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

c) How many guests drink only one drink? (1mark)

22. The volume of the figure below is 240 cm<sup>3</sup>. Use it to answer the questions that follow.



a) Find the value of h.

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

23. The sum of the values in the table are the same vertically, horizontally and diagonally. Fill in the missing values to complete the table.

1	15	14	4
12	.....	7	9
8	10	.....	5
.....	.....	2	.....

24. a) Using a ruler and a pair of compasses only, construct a triangle PQR in which PQ = PR = 6.5cm and angle QPR = 90° . (4marks)

b). Measure the line QR. (1mark)

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

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

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

b) Find the mode. (1mark)

c) How many pupils scored above the mean mark? (2marks)

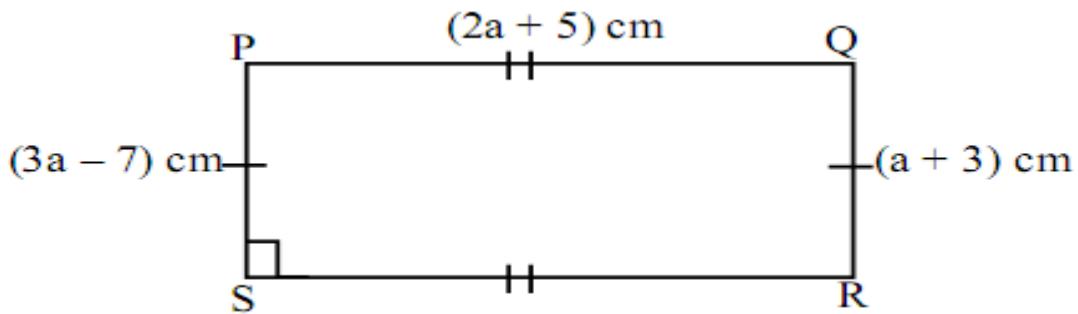
26. Mutoni went to the market and bought the items as shown on the table below.

<b>Item</b>	<b>Quantity</b>	<b>Unit price</b>	<b>Total cost</b>
Sugar	2 kg	Sh. 3,500 per kg	Sh.....
Meat	.....kg	Sh. 8,000 per kg	Sh. 24,000
Milk	2½ litres	Sh. 1,200 each litre	Sh. .....
Bread	4 loaves	Sh. .... @ loaf	Sh. 8,000
	<b>Total expenditure</b>		Sh. .....

a) Complete the table above. (5 marks)

a) If she went with sh. 50,000, find her change. (1 mark)

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



a) Find the value of a.

b) Work out the area of the figure above.

c) Calculate the total distance round the figure above.

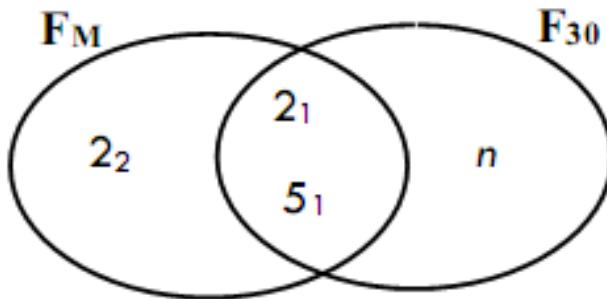
28. a) Work out: (3 marks)

$$\frac{0.24 \times 1.5}{0.8 \times 0.5}$$

b). Simplify: (2 marks)

$$\frac{2}{3} \times \frac{3}{4} \div \frac{5}{6}$$

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



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

b) Calculate the value of M. (2marks)

c) Work out the GCF of M and 30.

(2marks)

30. a) Solve:

(2 marks)

$$\frac{2}{3}y + 4 = 10$$

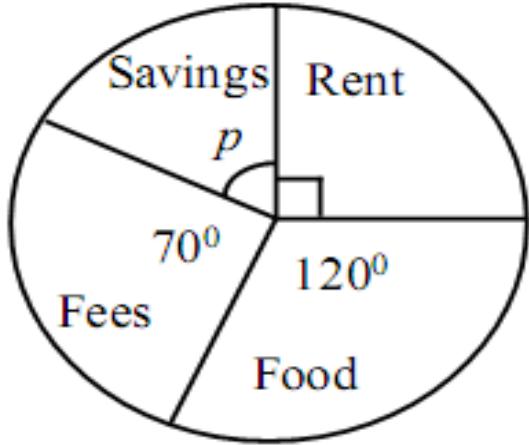
b) Olupot is 5 years older than his brother Jamwa. If their total age is 35 years, how old is Jamwa? (2 marks)

31. John, Fatima and Daniel shared a certain amount of money in the ratio of 2: 4: 3 respectively. If Daniel got sh. 150,000;

a) How much money did they share altogether? (4 marks)

b) How much more money did Fatuma get than John? (1 marks)

32. The pie-chart below shows Muzorewa's monthly expenditure. Use it to answer the questions that follow.



a) Find the value of  $p$  in degrees. (2 marks)

b) If he spends sh. 180,000 on rent, find his monthly income. (3 marks)

### MATHEMATICS SET TWENTY FOUR SECTION A

1	Work out; $13 - 0.6$	2	Simplify; $x+2+4x$
3	Sarsh arrived ten minutes before a 9o'clock bus left in the morning. Write the exact arrival time of Sarah.	4	Calculate the size of the angle $y$ shown in the figure below.

5	Write DLVII in Hindu-Arabic numerals	6	Simplify , -2- -5
7	Describe the shaded region	8	Calculate the area of a rectangle whose length and width are 7.5dm and 5dm respectively
9	Work out; $3/5+32/5$	1 0	Find the range of -6 and 2
1 1	Find the next number in the sequence; $1/4, 1/8, 1/12, 1/16, \dots$	1 2	Solve; $4y/7=20$
1 3	Using a pair of compasses and a ruler only construct an angle of 90°	1 4	Express 18 45 hours in the 12 hour system
1 5	What principal gives a simple interest of shs 30000 in 5 years at a rate of 2% p.a?	1 6	31 poles are placed at equal distance of 20m apart. What is the total distance from the first pole to the last one if the poles are in a straight line?
1 7	Workout; $2.8*1396-2.8*396$ using the distributive property.	1 8	$T=(3,4,5)$ and $M=(6,4)$ , Draw a venn diagram to show the two sets
1 9	Express 54km/hr into m/sec	2 0	What is the supplement of $t-10^\circ$ ?

**SECTION B**

21 The venn diagram below shows pupils who like Mirinda (M) and those who like pepsi cola (P). Given that only 5pupils like neither of the two drinks.

(a) Complete the venn diagram correctly.

(b) How many pupils like one type of drink?

22

A boy walks at 2km/hr for the first 20mins and then runs at 4km/hr for next 20mins

(a) What is the total distance the boy covered?

23

(b) Calculate the boy's average speed for the whole journey in km/hr.

(a) Solve for r;  $3(2r-1)-4(r-2)=13$ .

(b) Given that  $3t+7 > 4t-2$  and that t is a prime number, write a solution set for t.

24

ABC is triangle drawn accurately.

(a)Drop perpendicular from A to cut BC AT o.

(B) Measure AO

(C)Calculate the of triangle ABC.

25

(a) Workout;  $9.45/2.7+2.25/0.21$ .  
1/3

(b) Simplify;  $2 \frac{1}{3} + 1 \frac{5}{8} - \frac{1}{3}$

26

(a)Plot the following points on the grid.

A(-1,2),B(-3,-2), and C(1,-2).

(b)Join A to B to C to A.

(c)Taking the squares as centimetre squares

27

,workout the area of the resulting figure.

28

(a)Increase 1800 in the Ratio of 2:3.

29

(b)If David ,Annet and Musa share shs .24000 in the ratio as 3:1:3 respectively ,how much money does each get?

Afarmer has goats and birds on his farm. Altogether there are 13heads of birds and goatsand altogether 36legs of goats and birds.

(i)How many birds does the farmer have on the farm?

30

(ii)How much money can the farmer get if he sells each bird at sh.8000 and each goat at shs.20000?

Acircle has an area of 154m.Calculate its circumference .

(a)Use a numberline to subtract -3-4.

31

(b) The temperature of a certain liquid was found at  $2^{\circ}\text{C}$  and later it dropped by  $7^{\circ}\text{C}$ . What was the new temperature.

(a) What is the range of  $-4$  and  $-1$ .

James bought a radio at shs. 75000. He sold it and made a profit of 10%.

(a) Calculate his selling price.

32

(b) At what price would he have sold it in order to gain 15%

Study the graph below carefully.

- (a) At what time did Alice start the journey?
- (b) For how long did Alice rest on the way?
- (c) What was Alice's average speed for the whole journey.

**MATHEMATICS SET TWENTY FIVE  
SECTION A**

1

**Workout:**  $63 \times 3$

2

**Write Forty nine thousand four  
in figure.**

3	Simplify: $3m-4y-9m+6y$ .	4	Write XCIV in Hindu Arabic numerals
5	Given that set R=(all prime numbers less than 13) Find n(R)	6	If three books cost shillings 1800, how many books can be bought with shillings 4800
7	Simplify: -5 - 7	8	How many lines of folding symmetry has the figure below.
9	Write 0.0021 in standard form.	10	Solve : $9+2x=1$
1 1	Add: 342five + 33five.	12	John and Ali shared 54 pens in the ratio 5:4 respectively. How many pens did John get?
1 3	Express 3.5kg in grammes.	14	Trees were planted in a straight line at an interval of 5m. How many trees were used?

1 5	Round off 0.95 to the nearest tenths.	16	Using a pair of compasses,a ruler and a pencils only,construct an angle of 75 in the space provided.
1 7	Find the range of 3,-2,4, and 1.	18	Abus left Iganga town for Kampala at 11:45am and took 2hours and 50 minute on the way. At what time did it reach it's destination?
1 9	What is the next number in the sequence?  0.01,0.04,0.09,0.16,...	20	Find the area of the figure below

SECTION B

21 In p.7 class ,some candidates passed Maths (M) and other candidates passed English,some candidates passed while others failed both subjects as shown below.

(a)If 31 candidates failed Maths ,find the value of P.

(b)How many candidates sat for the exams altogether?

22

(c) If a candidate is picked at random, What is the probability that one picked failed all the subjects?

23

During a staff meeting held at BUTE primary school , $\frac{1}{4}$  ate matooke,  $\frac{3}{5}$  ate Rice and the ate Posho.

(a) Find the fraction of staff who ate posho.

(b) If 12 staff members ate posho, how many staff members attended the meeting?

24

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

(a) Find the value of  $y$  and  $x$ .

25

(b)Find the perimeter of the figure above.

Abus left Mbale for Kampala at an average speed of 50km/hr for 4hours. It left Kampala at 12:00noon and drove back to Mbale on the same road at an average speed of 80km/hr.

(a)How far is Kampala from Mbale?

(b)At what time did the bus arrive at Mbale?

26

(a)Solve for y:  $2(3y+4)-(2y+2)=10$ .

(b)Solve for m:  $9m-4 < 6m+2$ .

27

The average the three consecutive even numbers is 12.

28

(b)Workout the range.

The interior angle of a regular polygon is 140.

(a)Find the size of the exterior angle.

(b)Name the polygon.

29

The figure below is a rectangular tank .Study it and use it to answer the questions that follow.

(a)Find the volume of the tank.

(b)Calculate the capacity of the tank in litres.

30

(c) If one litre of water is sold at shillings 500, how much money is collected when all the water in the tank is sold?

The table below shows charges of taxi from Kampala to Lugazi. Study it carefully and answer the questions that follow.

Types of passengers	Children	Adult
Charges for passengers	Shillings 2000	Shillings 3000

(a) If Mr. Okello travelled with his wife and 3 children, how much money did he pay altogether?

(b) If the same taxi on the return journey had 6 children and 8 adults, find the amount of money the conductor collected altogether.

31

32

The pie chart below shows how Mr Mubbiru spends his monthly salary.

(a) If he puts shillings 15000 on savings ,find his monthly salary.

(b)Workout the amount of money spent on medical care.

(a)Using a pair of compasses, a ruler and a pencil only, construct a triangle ABC, such that  $\text{line AB} = 6\text{cm}$ ,  $\text{angle BAC} = 30^\circ$  and  $\text{angle ABC} = 120^\circ$ .

(b)Measure line AC in cm

## MATHEMATICS SET TWENTY SIX

1	Add: 3.06 +27	2	Write MCDV in Hindu Arabic numerals.
3	Set A = (Even numbers less than 10), Set B =(Prime numbers less than 10),Find $n(A \cap B)$	4	Write in words 459015
5	Find the square root of $\frac{6}{1/4}$	6	Change 201three to decimal base.
7	Simplify: $7 - 3$	8	Subtract: $2 - 6 =$ _(finite 9)
9	Find the next number in the sequence 1,3,6,10,15,...	10	Write speed of 72km/hr in metres per second.

11	How many lines of symmetry does the figure below have?	12	Using a pair of compasses and a ruler only ,bisect the line AB below.
13	Find the mean of $4n$ , $6$ , $15$ , $6n$ and $0$ .	14	Express $50\text{cm}$ as a ratio of $1\text{m}$ in its lowest form.
15	Calculate the length of the arc QPR.	16	16girls share shillings $14400$ equally.How much does each get?
17	Today is Tuesday. What day of the week will it be after $73$ days?	18	One U.S dollar cost shillings $1750$ .Find how many dollars can one get for shillings $88750$ ?
19	The volume a triangular prism is $90\text{cm}^3$ . Find the value of $x$	20	In the class of $60$ children , $45\%$ are girls. How many boys are there?

### SECTION B

21

22

(a) How many litres are in the tank?

(b) Find number of litres required to fill the tank.

23

Babirye spent  $\frac{1}{4}$  of her salary on fees and  $\frac{1}{6}$  of the remainder on clothes. She was then left with 144000.

(a) How much is her monthly salary?

(b) How much was spent on clothes?

24

The sum of the interior angle of a polygon is 1080.

(a) Calculate the number of sides of the polygon.

(b) Calculate each exterior angle of this polygon.

**25**

(c)Find the size of each interior angle of this polygon.

(a)Solve for x:  $3(x+3)=2(x+2)$

**26**

(a)Find the area of the shaded part.

(b)Find the perimeter of the figure above.

**27**

During a football match at Nakivubo stadium adults paid shillings2500 for entry and children paid shillings1500 per head. Given that 4children attended and shillings.175000 was collected from Adult alone.

(a)How many adults attend the match?

(b)How much money was collected altogether from children and adults?

28

Maria travelled 110km in 2 hours and drove another 80km in 3 hours. Calculate her average speed for the whole journey.

29

Find the value of  $y$  in the figure below.

30

Ssengendo can clear a garden in 6 days and Semanda can clear the same garden in 3 days.

(a) What fraction of the garden can they clear in one day if both work together at the same rate?

(b) How many days will it take them to clear the garden if they work together at the same rate?

31

(a) Solve:  $44p = 35$ .

(b) Work out:  $101\text{two} * 11\text{two}$ .

32

Study the travel graph below and use it to answer the questions that follow.

(a) What does 1 small square represent on the horizontal axis?

(b) How far is town y from town x?

(c) At what time did the car arrive at town y?

**MATHEMATICS SET TWENTY SEVEN**  
**SECTION A: 40 MARKS**

1. Add:  $254 + 38$

2. Work out:  $-8 - 3$

3. Simplify:  $5x - 3p - 2x + 5p$

4. Given that set  $P = \{1, 2, 3, 5\}$ , how many subsets has set P?

5. Change  $3\frac{1}{5}$  kg to grams.

6. What is the next number in the sequence below?

1, 8, 27, 64, \_\_\_\_\_.

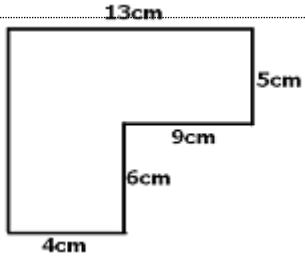
7. Round off 7.964 to the nearest tenths.

8. Using a pair of compasses, a ruler and a pencil only, construct an angle of  $120^\circ$

9. Express 0.0684 in standard form.

10. Solve:  $3(x + 4) = 21$

11. Find the perimeter of the figure below.



12. Find the simple interest on sh.120,000 deposited in the bank at an interest rate of 5% per annum for 9 months.

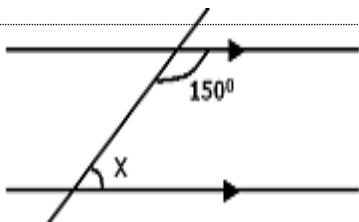
13. Find base p given that  $23p = 15\text{ten}$ .

14. Work out:  $3 - 4 = \underline{\hspace{2cm}}$  (Finite 5)

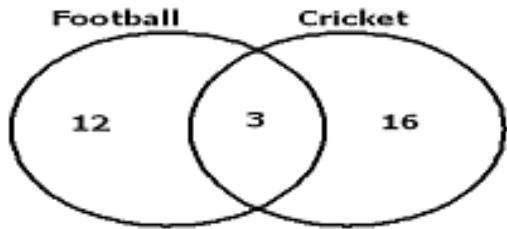
15. The cashier of Hillside P/S has a bundle of ten thousand shillings notes numbered consecutively from PQ 011563 to PQ 001612. How much money has she?

16. Given that  $q = 4$  and  $b = -2$ , find the value of  $2q - b$ .

17. Find the value of  $x$ .



18. The Venn diagram below shows the number of pupils who play football (F) and Cricket (C). How many pupils enjoy games?



19. The price of a shirt was increased by 10%. If the new price of sh. 44,000, find the old price.

20. Abdul is  $x$  years old. He is 5 years younger than Madina. How old is Madina?

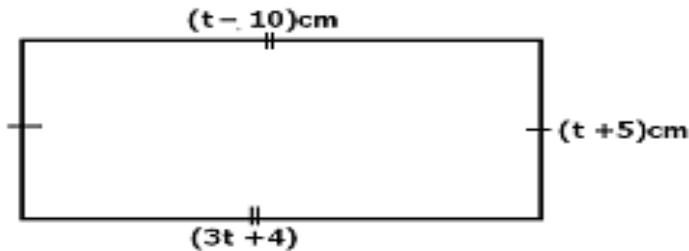
#### SECTION B: 60 MARKS

21. At a wedding party attended by 40 guests, all drank water, 18 drank soda and water, 20 drank juice and water, 2 took all the three drinks,  $y$  guests drank water only.

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

(b) How many guests drank juice only?

- (c) Find the total number of members who took only two drinks.
22. In an examination containing 30 questions, 3 marks are awarded for every answer got correct and a mark is deducted for every number failed.
- (a) Kafunvu got 20 questions correct, how many marks did he score.
- (b) Sumayiya scored 66 marks, how many numbers did she fail?
23. Use the figure below to answer the questions that follow.



- a) Find the value of t.
- b) Find the length and width of the figure.

c) Work out the perimeter.

24. Jinja and Kampala are 90 kilometres apart. A motorist left Jinja for Kampala reaching it within 2 hours and returned within  $2\frac{1}{2}$  hours.

a) Find the speed of the motorist from Jinja to Kampala.

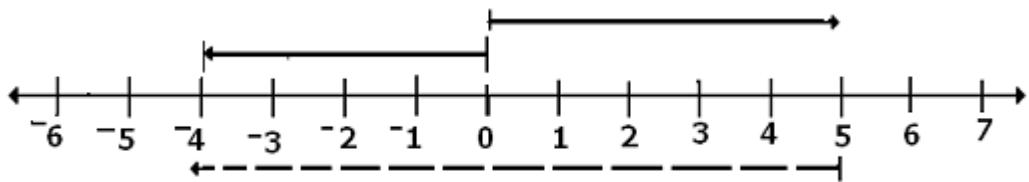
b) Work out the average speed of the motorist for the whole journey.

25. a) Using a ruler, a pencil and a pair of compasses only, construct triangle MTN where angle TMN =  $60^\circ$ , angle MNT =  $45^\circ$  and MN = 8 cm

b) Measure:

(i) Angle MTN

26. a) Write the integers represented by the arrows on the number line below.



b) Write the mathematical statement that has been represented on the number line by the arrows.

27. Olanya had sh.55,000 and he bought the following items in the table below:

ITEM	QUANTITY	UNIT COST	TOTAL
Knickers in dozen	$\frac{1}{2}$ dozen	Sh.12000	Sh.....
Skirts	2 skirts	Sh.....	Sh.16,000
Stockings in dozen	.....dozen	Sh.1500	Sh.4,500
Blouses	2 blouses	Sh.6250	Sh.....

a) Complete the table above correctly.

b) If he was given a discount of 10%, how much money did he pay for the items?

28. Mr. Web spends 25% of his salary on fees, 30% on food, 35% on medical care and saves the rest. Using a radius of 3.5cm, draw an accurate pie chart to show the above information.

29. Jane used  $\frac{1}{3}$  of her salary on food,  $\frac{2}{5}$  on clothing and saved the rest of her salary.

a) What fraction of her salary did she save? (3mks)

b) If she saved sh.240000, find her monthly salary.

30. The exchange rate of one United States Dollar to Uganda shillings is US \$ 1 to Ug. Sh. 3800 and the exchange rate of one Kenya shilling to Uganda shillings is Ksh.1 to Ug.sh. 35.

a) If Mr. Azania was given Ksh.19000, how many United States dollars did he have?

b) How much money in Uganda shillings do I have if I am given US \$ 1500?

31. Bunjako had a sum of money which he gave out to his daughters Irene, Sylvia and Joan in the ratio of 4: 5: 6 respectively. If Irene got sh. 80,000 less than Joan, find the amount of money he gave out to his daughters.

a) How much was each given?

b) What percentage of the money did Joan get?

32. The table below represents the weight of girls in P.7 at St. Patrick Primary School. Study it carefully and answer the questions that follow.

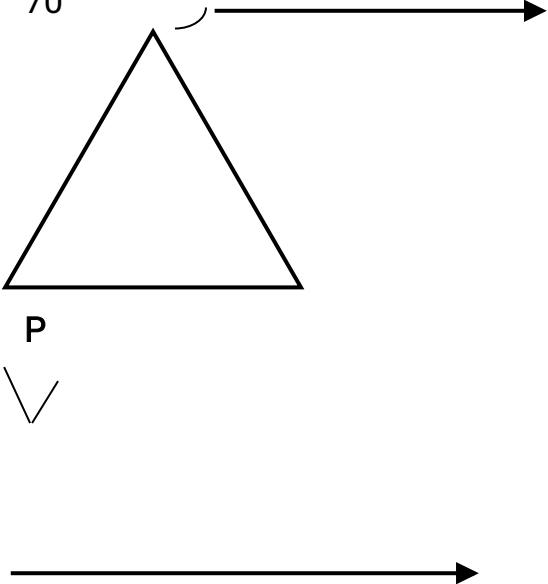
Weight in kg	No. of girls	Tallies	Total
27	10	_____	_____
30	_____	_____	240
_____	6		120
15	_____	_____	180
35	4	_____	_____
_____	10		400

a) Complete the table above.

b) Find the modal weight.

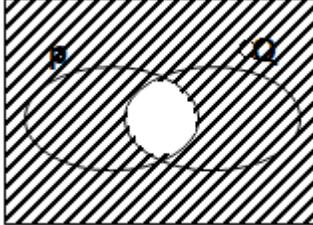
c) Calculate the average weight.

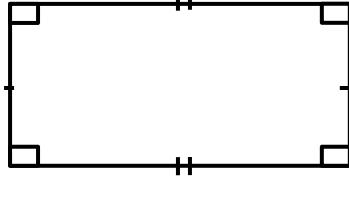
**MATHEMATICS SET TWENTY EIGHT**  
**SECTION A (40 marks)**

1.	Add: $42 + 44$	2.	Change 4kg to grams.
3.	Simplify: $+7 - +4$ .	4.	The cost of 5 chairs is Sh. 15,000. What is the cost of 3 chairs?
5.	Given that set $Q = \{ 2, 5, 7, 9 \}$ and set $R = \{ 1, 2, 8, 3, 7, 11 \}$ . Find $\cap(Q \cap R)$	6.	<p>Calculate the value of <math>P</math> in the diagram below.</p> 

1

7.	A taxi driver covered a distance of 60km in $1\frac{1}{2}$ hours. Find the speed at which he was travelling.	8.	$\frac{3}{8}$ of the children in a school are boys. If there are 25 girls. Find the total number of children in the school.
9.	Find the square root of 0.25.	10.	Using a pair of compasses, a ruler and a sharp pencil construct an angle of $30^{\circ}$ .

11.	Express 0.0435 in scientific notation.	12.	 If  represents 5 apples, how many apples are represented by  ?
13.	Describe the un shaded part. 	14.	Express $101_{\text{two}}$ in the decimal base.
15.	Write 45 in Roman Numerals.	16.	Workout: $1 \frac{1}{4} + \frac{3}{4}$

17. If $a = 2$ and $b = 3$ , find the value of $3a + 3b$ .	18. Find the median of the following numbers: 8, 7, 15, 13, 11	19. Evaluate: $3^3 + 2^2$	20. The area of the rectangle below is $30\text{dm}^2$ . Find its width. 
--	---	---------------------------	--

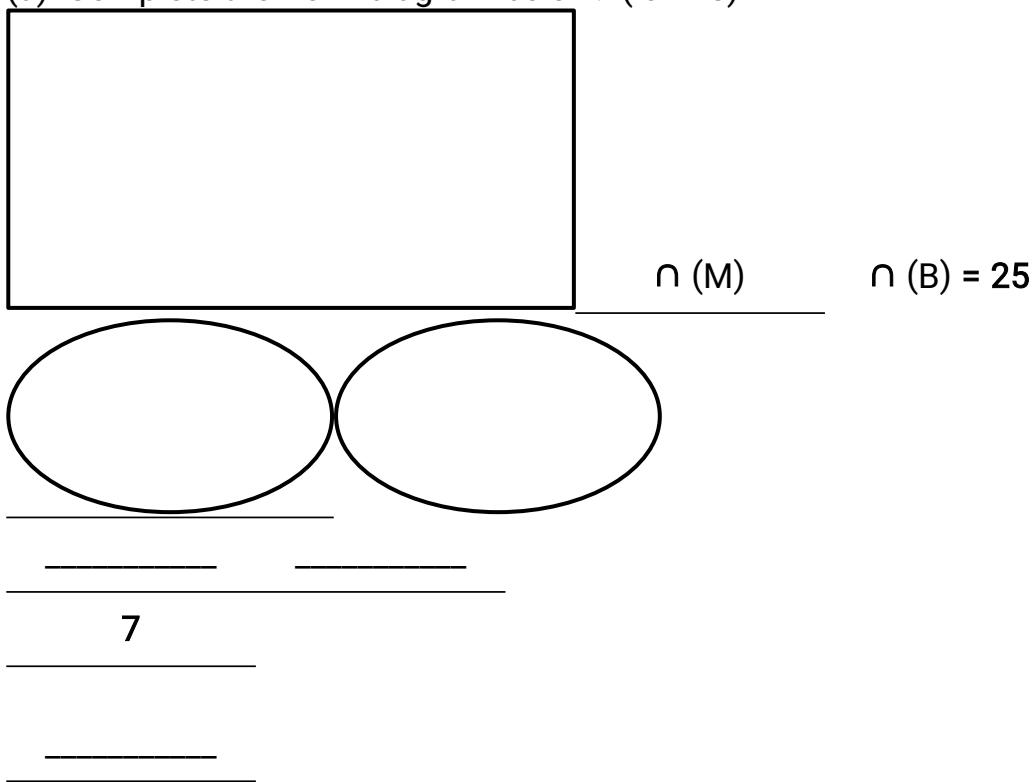
3

21.

### SECTION B

There are 41 pupils in a class, 25 like Busera (B), 7 like both Busera and Munanansi,  $2a + 5$  like Munanansi only (M) while 5 dislike the two.

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



22.

- (b) Find the value of a. (2mks)

Given the number 2,085,

- (a) Write the above number in words.(1mk)

- (b) Round off the above number to the nearest hundreds.(2 mks)

(c) Find the product of the values of 2 and 5.( 2 mks)

23.

(a) Simplify:  $\frac{0.14 \times 0.8}{0.2 \times 0.07}$  (3mks)

(b) Express 0.3636..... as a common fraction. (3mks)

(a) Solve the equation :  $3(y + 1) - (y - 3) = 10$  (3mks)

24.

(b) Ronald is three times as old as Tom. If their total age is 24 years. How old is Tom? (2 mks)

5

25.

(a) Using a pair of compasses, a ruler and a sharp pencil construct a triangle PLE in which PL = 7cm,  $\angle LPE = 45^\circ$  and PE = 5cm. (4mks)



(b) Measure LE = \_\_\_\_\_ (1 mk)

26. Study and complete the table below showing Mr. Mukasa's shopping bill. (5mks)

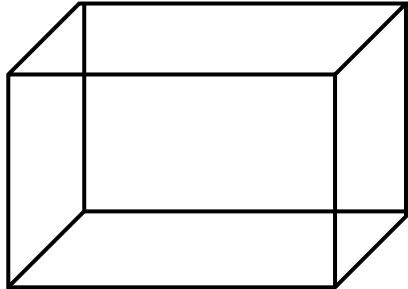
Item	Quantity	Unit cost	Total cost
Bread	_____	Sh. 7,000	Sh. 14,000
Milk	1½ litres	Sh. 1,000	Sh. _____
Rice	3kg	Sh. _____	Sh. 4,500
Salt	2kg	Sh. 1,500	Sh. _____
<b>TOTAL EXPENDITURE</b>			Sh. _____

(b) If he was given a change of Sh. 7,000. How much did he go with?

27.

The container below contains 60 litres of milk.

- (a) Find the value of  $h$ .  
(3 mks)



$h$

30cm

50cm

28.

- (b) Calculate its total surface area. (2mks)

7

The interior angle of a regular polygon is 5 times the size of the exterior angle.

- (a) How many sides does the polygon have? (3mks)

29.

- (b) Calculate its interior angle sum. (2mks)

30.

Use the equation  $y = x - 1$ . Complete the table below. (5mks)

x	-2	_____	_____	0	_____
y	_____	0	-2	_____	1

(a) Use distributive property to work out  $(85 \times 20) - (45 \times 20)$  (2mks)

(b) Two bells, one for lower primary ring after 20minutes and for upper primary after 90minutes. After how many minutes will the two bells ring together? (3mks)

31.

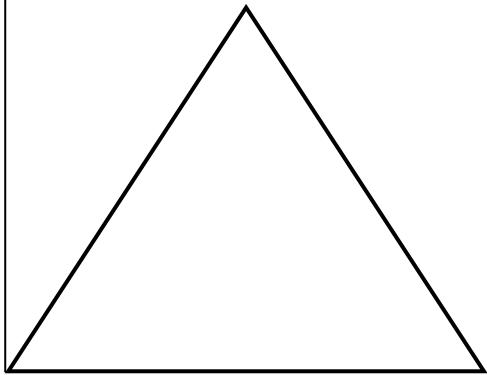
Three boys Alex, Allan and Benard shared a certain number of mangoes in the ratio of 3:4:5 respectively. If Benard got 25 mangoes.

(a) How many mangoes did they altogether share? (2mks)

(b) Express Alex's share as a percentage of the total. (2mks)

(4y)

32. Study the diagram below and use it to answer the questions that follow.



(a)

Find the value of y. (2mks)

$$(2y + 2)\text{cm} \quad \underline{\hspace{2cm}} \quad \backslash / \quad \underline{\hspace{2cm}} \quad | \quad 12\text{cm} \quad \backslash$$

(b) Calculate the height of the triangle.  
(2mks)

Parent's comment: \_\_\_\_\_ sign \_\_\_\_\_ contact \_\_\_\_\_

Teacher's comment: \_\_\_\_\_ sign \_\_\_\_\_ contact \_\_\_\_\_

NOTE:

Tilda and Paul Mixed Day and Boarding Primary School is found in Entebbe-Mpala region in Uganda, privately owned institution handling learners from Nursery to primary seven.

Registration is in progress from Nursery to P.7, from Monday -Saturday, starting 8:00a.am - 5:00P.M.

FOR MORE INFORMATION:

Director: 0782634937/0754056534

Head teacher: 0786983428

Director of Studies (DOS):0752113597/0778988819