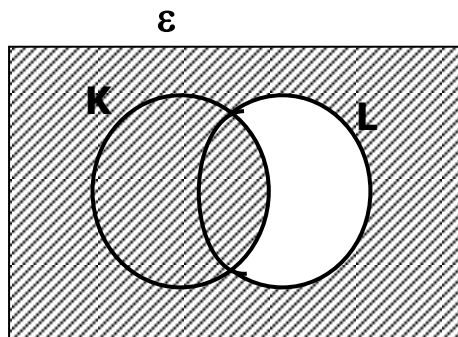


**SECTION A.(40 MARKS)**

1. Work out:  $52 \times 3$
  
  
  
  
  
  
  
  
  
  
2. Write four hundred fifty thousand, ninety in figures.
  
  
  
  
  
  
  
  
  
  
3. Given that set  $A = \{\text{all prime numbers less than } 7\}$ . How many proper subsets can be got from set A?
  
  
  
  
  
  
  
  
  
  
4. Simplify:  $^{-}7 - ^{-}6$ .
  
  
  
  
  
  
  
  
  
  
5. Find the LCM of 6 and 8
  
  
  
  
  
  
  
  
  
  
6. What is the value of 8 in the figure 3876?

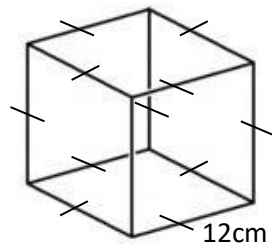
7. How many similar strides of 20cm can a boy make to cover a distance of four metres?
8. Using a pair of compasses, a ruler and a sharp pencil only, construct an angle of  $105^\circ$  in the space provided below.
9. Use set notations to describe the shaded region on the venn diagram below.



10. Five pens cost shs. 15000. How many similar pens can one buy with sh. 45000 at the same rate?
11. Solve for M:  $2(m - 6) = 8$ .

12. The headteacher distributed 2525 books equally among the five streams. How many books did each stream get?
13. A P.7 candidate did seven consecutive tests and scored. 60, 90, 45, 58, 60, 82, 76. Work out the candidate's modal frequency.
14. Express 20cm as a ratio of 2m.
15. There are 20 electric poles in a straight line. If the distance from the first to the 20<sup>th</sup> Pole is 380m, find the interval between every two poles.

16. The figure below is a cube. Use it to answer the question that follow



Find the capacity of the cube in litres.

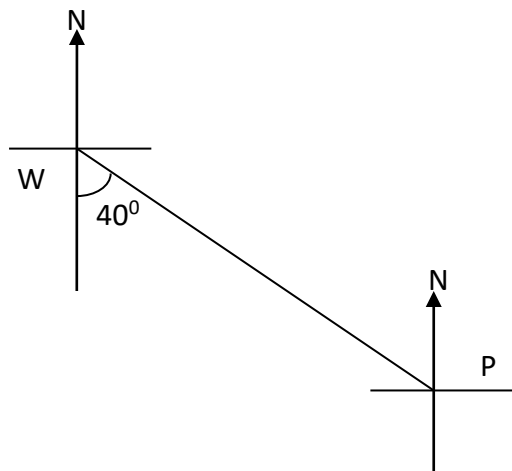
17. When a dice is tossed once, what is the probability of picking a factor of six at random?

18. Uganda Cranes match against Egypt kicked off at a quarter to 4:00p.m. Write this time in a 24 hour clock time.

19. A tourist has Ug shs. 159750 and wants to buy US dollars from a forex bureau.  
How many US dollars will the tourist get?

Rate at which the bureau buys	Rate at which bureau sells
UD \$ 1 = Ug sh. 3500	US \$ 1 = Ug shs. 3550

20.

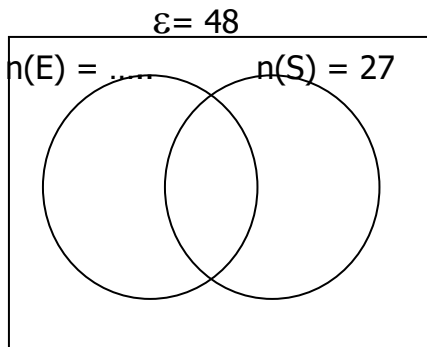


What is the bearing of town **W** from town **P**?

**SECTION B.(60 MARKS)**

21. In a class of 48 pupils, 27 like Science(S) , y pupils like English(E) only, 7 like both subjects and 5 dislike Science and English.

(a) Use the information given to complete the Venn diagram below.



**(3 marks)**

(b) Find the value of y

**(2 marks)**

(c) How many pupils like only one subject?

**(1 mark)**

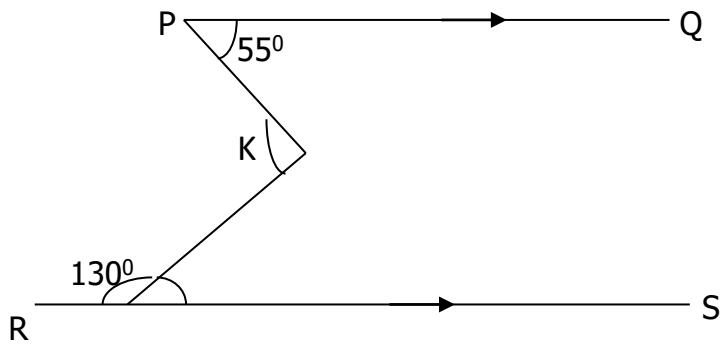
22. (a) Express 142 in powers of 3.

**(2 marks)**

(b) Write the number whose standard form is  $8.74 \times 10^3$ .

**(2 marks)**

23. (a) In the diagram below, **PQ** is parallel to **RS**. Study the diagram and use it to find the size of angle **K**. (2 marks)



- (b) What angle is  $\frac{1}{4}$  of its supplement? (3 marks)

24. A man bought the following items from quality super market.

2 loaves of bread at shs. 4500 per loaf.

600g of sugar at shs. 4500 per kg

1  $\frac{1}{2}$  kg of meat at shs. 15000

A dozen of glasses at shs. 3000 a pair.

(a) Calculate the Man's total expenditure. **(3 marks)**

(b) If the man was given a discount of 10%, find his change if he went with shs. 50000. **(2 marks)**

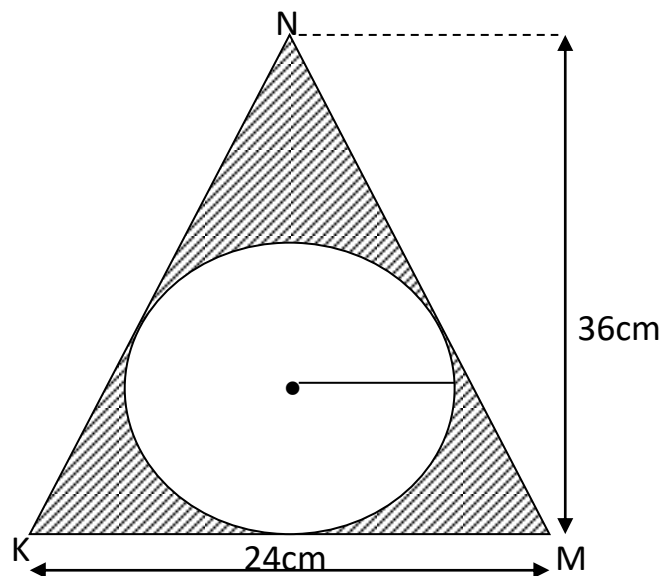
25. (a) Using a ruler, a pair of compasses and a pencil only, construct an isosceles trapezium in which  $PQ = 8\text{cm}$ ,  $PS = QR = 4.5\text{cm}$ ,  $\angle SPQ = \angle RQP = 60^\circ$ .  
Join point R to point S. **(5 marks)**

(b) Measure SR **(1 mark)**



26. A book cost  $(x + \text{sh}400)$  while a pen cost  $(x - \text{sh}100)$ . If the total cost of three pens and two books is shs. 6500, find the cost of each item. **(5 marks)**

27. The figure below shows a circle inscribed in a triangle whose base is 24cm and height 36cm. Given that the area of the shaded part is  $124\text{cm}^2$ . (Use  $\pi = \frac{22}{7}$ )



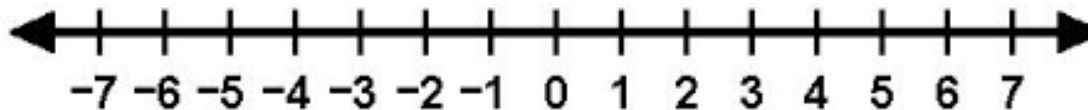
- (a) Find the area of the circle.

(b) Find the radius of the circle.

**(3 marks)**

28. Kigumba learns a new dance in which he takes 6 steps forward followed by 4 steps backward. Represent the above 2 measures of the dance on a numberline to find how far away the dancer was from his starting point.

**(4 marks)**



29. Matania gave  $\frac{1}{3}$  of his land to his brother Joseph,  $\frac{1}{4}$  to Maria his sister and he was left with 40 acres of land.

(a) What fraction did he give to both Joseph and Maria?

**(2 marks)**

(b) How big was Matania's land before giving part of it to Joseph and Maria?

**(3 marks)**

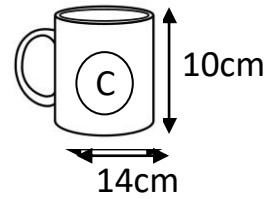
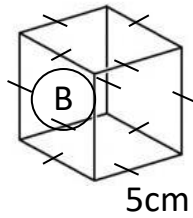
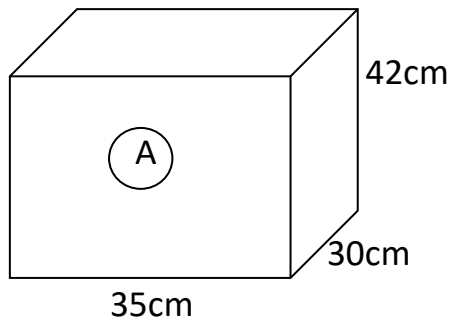
30. A bus travelled from Kisoro to Kabale at a speed of 90km/hr for 2hrs 30 minutes and later returned to Kisoro at a steady speed of 100km/hr.

(a) How far is Kisoro from Kabale? **(2 marks)**

(b) Calculate the return time to Kisoro **(1 mark)**

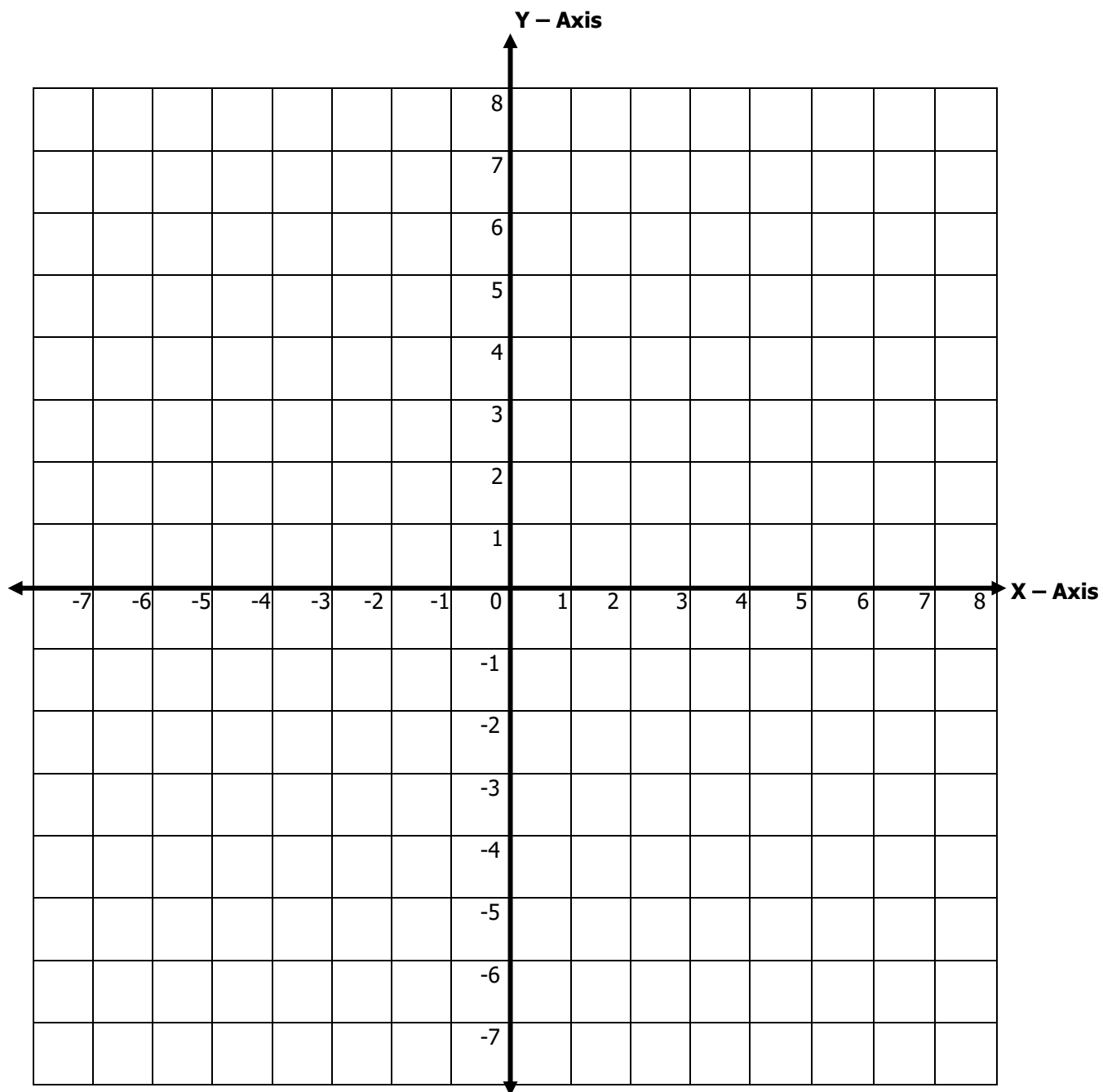
(c) Calculate the average speed for the whole journey. **(2 marks)**

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



- (a) How many cubes of type **B** can be packed in prism **A**? (2 marks)
- (b) How many layers of tins **C** can be arranged in Prism **A**? (1 marks)
- (c) If prism **A** contains water and John uses tin **C** to draw water from it, how many cupfuls of **C** can he get? (2 marks)

32. On the grid below plot points **K**(-3, -3) **L**(2, -3) **M**(5, 4) **N**(0, 4)     **(4 marks)**



**END.**

NAME: \_\_\_\_\_

### SECTION A (40 MARKS)

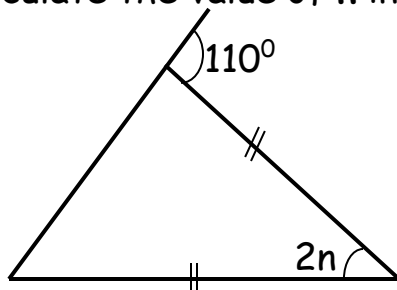
1. Solve:  $2 + K = 1$
2. Express 750g as a fraction of 2kg.
3. Atim is aged 19 years. Express her age in Roman numerals.
4. Convert  $1100_{\text{two}}$  to ten base.
5. Given that  $K = \{\text{all composite numbers between 5 and 12}\}$  and  $M = \{\text{square numbers between 0 and 15}\}$ , find  $n(K \cap M)$

6. Simplify:  $1\frac{1}{3} - 2\frac{3}{4}$

7. The cost of 9 pens is sh. 81,000. How many similar pens can one buy with sh. 108,000?

8. The ratio of boys to girls in a class is 3:5. If the class consists of 40 pupils, how many more girls than boys are in that class?

9. Calculate the value of  $n$  in degrees.

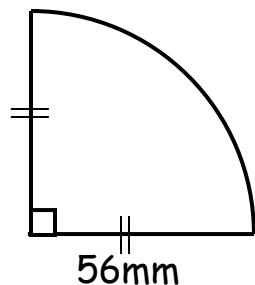


10. The average mark of 8 pupils is 74. What is 10 marks more than their total mark?

11. Given that  $a = -7$ ,  $b = 5$  and  $c = -2$ , find the value of  $2a^2 - bc$ .

12. After covering  $\frac{3}{7}$  of his journey, a motorist still had 40km to reach his final destination. How long was the whole journey?

13. Find the perimeter of the figure below (take  $\pi$  as  $\frac{22}{7}$ ).



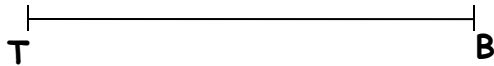


14. A lesson of 45 minutes ended at 3:15p.m. At what time did it begin?

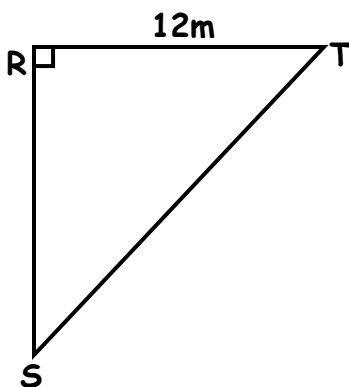
15. Write the value of 9 in 75.09 in words.

16. Drop a perpendicular from point **P** to meet line **TB** at **O**.

• P



17. Work out the length of TS if the area of the figure below is 30 square metres.



18. A trader deposited sh. 500,000 in Centenary Rural Development Bank at an interest rate of 10% p.a for 6 months. Find the simple interest he earned after that period.
19. 8 men can slash a school compound in nine days. How many more men are needed to slash the same compound in only three days if they work at the same rate?
20. What is the square of seven hundredths?

**SECTION B( 60 Marks)**

21. Agaba is 15 years older than Ashaba. In five years' time, Ashaba will be half as old as Agaba.

(a) How old is each now?

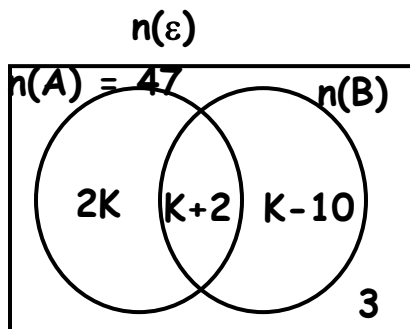
(b) How old was Agaba fifteen years ago?

22. A circular wheel has a radius of 14cm. How many complete revolutions will it make to cover a distance of 8.8km?

23. (a) Simplify;  $1\frac{3}{7} + 7\frac{2}{3} \div 3\frac{5}{6}$

(b) Mr. Musoke bought a car at sh.8,500,000 and sold it to Mrs. Katongole at loss of 10%. Mrs. Katongole sold it to Mr. Ejalu at a profit of 20%. How much money did Mr. Ejalu pay for the car?

24. Study the Venn diagram below and answer questions that follow.



(a) Find the value of K.

(b) Work out

(i)  $n(B)^1$

(ii)  $n(\varepsilon)$

25. (a) A baby slept from 9:20p.m to 12:45a.m the following day. For how long was it asleep?

(b) Express 40m/s to km/hr.

(c) Convert 12:25p.m to the 24 hour clock system.

26. A farmer in Nakasongola district used her land as follows;

$\frac{1}{4}$  of it to grow tomatoes,  $\frac{1}{2}$  of it to rear animals and the rest for food crops. Represent the above information on a pie-chart of radius 5cm.

27. (a) Using a pair of compasses, a sharp pencil and a ruler only, construct a parallelogram QPRS and ruler only, where  $QP = 5.5\text{cm}$  and  $PR = 4\text{cm}$  and angle  $SQP = 60^\circ$ .

(b) Measure the length of diagonal QR.

28. (a) A tank of water is  $\frac{3}{4}$  full. When 30 litres of water is drawn from it, it remains  $\frac{7}{12}$  full. Find the full capacity of the tank. (3 marks)

29. (a) Work out the product of the next two numbers in the sequence below.

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

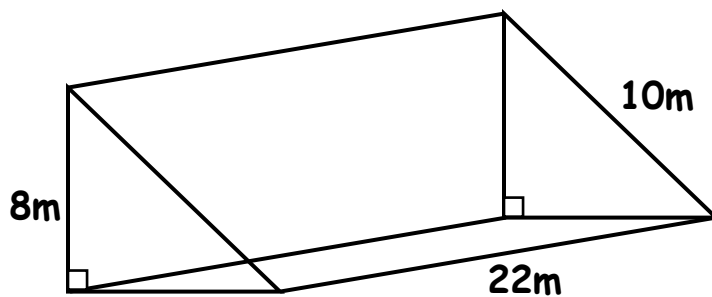
(b) The median of three consecutive even numbers is  $y$ . Find the numbers if their sum is thirty.

30. (a) Evaluate :  $2.5 - 9.55 + 10.6$

(b) Simplify:  $\frac{2^6 \times 2^9}{2^4 \times 2^7}$

(c) What number has been written in standard form to give  $2.73 \times 10^1$ ?

31. Below is a triangular prism. Study it carefully and answer questions about it.

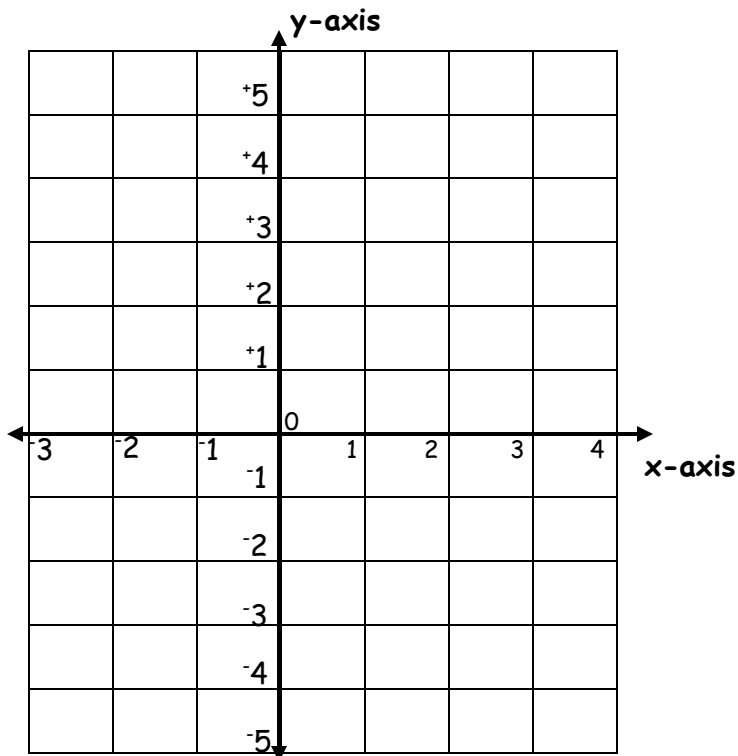


(a) Calculate its volume.



(b) Work out its total surface area.

32. (a) On the grid below, plot these points  $C(-2, 3)$   $D(1, 3)$   $E(3, -1)$  and  $F(-2, -1)$



(b) Join  $C$  to  $D$ ,  $D$  to  $E$ ,  $E$  to  $F$  and  $F$  to  $C$ .

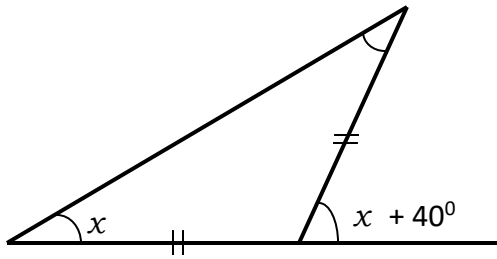
(c) Name the figure formed.

END.

## **SECTION A.**

1. Work out:  $75 - 43$ .
2. Express XIX in words.
3. Set  $K = \{ \text{even numbers less than } 10 \}$ . Find  $n(K)$
4. Six boys completed a piece of work in 32 days. How many More boys are needed to complete the same piece of work in 12 days?
5. Solve:  $5 - P = 8$
6. Shade 50% of the diagram below.


7. In the diagram below, find the value of  $x$ .



8. Write the expanded number.

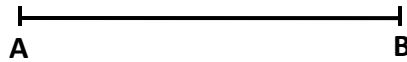
$$(3 \times 10^4) + (4 \times 10^1) + (8 \times 10^0)$$

9. A baby slept from 9:20p.m and woke up at 4:30am, For how long was the baby asleep?

10. Find the greatest common division (GCD) of 18 and 24.

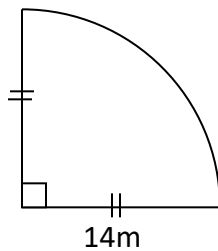
11. Using a pair of compasses, a ruler and a sharp pencil, drop a perpendicular from point X to meet AB at P.

• X



12. Work out:  $\frac{1}{4} + 2\frac{1}{2} \div 1\frac{1}{4}$ .

13. Find the perimeter of the quadrant below.



14. Which number has been written in standard form to give  $2.63 \times 10^3$ ?

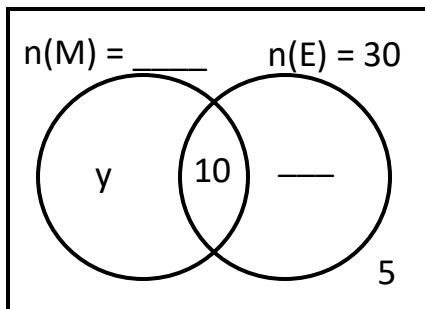
15. Round off 38 to the nearest tens using a numberline.
16. Express 1.3333 .....as a mixed number.
17. Find the average of 5,  $x + 1$  and  $2x$ .
18. Simplify:  $24p^3 \div 8p^2$ .
19. The number of subsets in set A is 32. How many elements are in set A?

20. How long will a bus travelling at 120km/hr take to cover 90km?

**SECTION B.**

21. In a class of 60 pupils, 30 like English (E) y like Mathematics (M) only, 10 like both subjects and 5 do not like any of the two subjects.

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



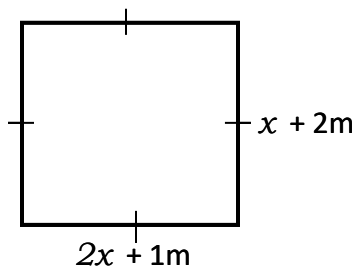
(b) Find the value of Y.

(c) How many pupils do not like both subjects altogether?

22. (a) Using a pair of compasses, a ruler and a sharp pencil, construct a triangle KFM where  $KF = 6\text{cm}$ ,  $\angle MKF = 120^\circ$  and  $\angle KFM = 30^\circ$ . **(4 marks)**

- (b) Measure line KM. **(1 mark)**

23. The perimeter of the rectangle below is 30 metres . Use it to answer the questions that follow.



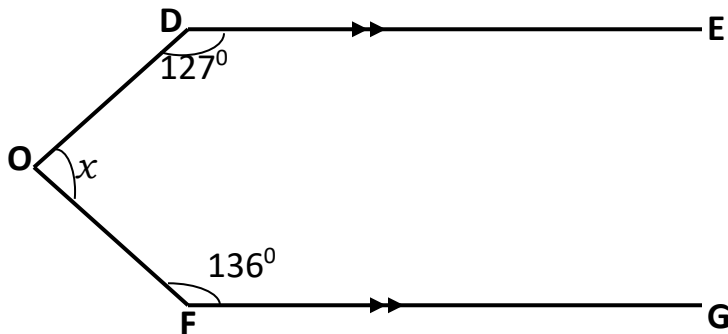
- (a) Find the value of  $x$ . **(3marks)**

- (b) Calculate its area. **(2 marks)**

24. Saidi is twice as old as his sister Sauda. In 5 years time their total age will be 70 years. How old is each one now? **(4marks)**

25. (a) The sum of interior angles of a regular polygon is  $1440^\circ$ .  
Name the polygon **(3marks)**

- (b) In the figure below,  $\underline{DE}$  is parallel to  $\underline{FG}$ , angle  $\underline{ODE} = 127^\circ$  and angle  $\underline{OFG} = 136^\circ$ . Calculate the size of angle  $x$ . **(2 marks)**





26. Irene went to the shop and bought the following items.

A bar of soap at shs. 4000.

500ml of cooking oil at sh.7000 per litre.

1½kg of sugar at shs.5000

(a) Calculate Irene's bill. **(3 marks)**

(b) If she was allowed to pay shs. 12500, calculate her percentage discount.

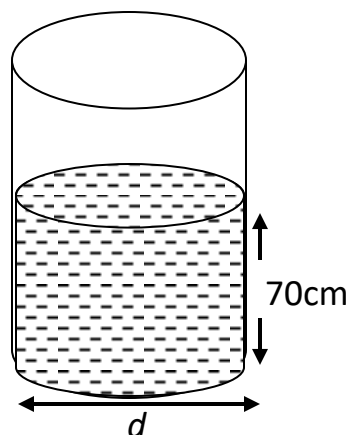
**(2 marks)**

27. In a P.7 class, there are 20% more boys than girls.

(a) What is the percentage of boys? **(3 marks)**

(b) If there are 20 girls in the P.7 class, find the total number of pupil in that class. **(2 marks)**

28. The cylindrical tank shown below has 10.78 litres. Use it to answer questions that follow.



- (a) Find the diameter of the tank. ( 3 marks)

- (b) If the tank is  $\frac{2}{3}$  full of petrol, how many litres does it hold when full?

(2 marks)

29. (a) Work out:  $1101_{\text{two}}$  (2 marks)

$$\begin{array}{r} x \quad 11_{\text{two}} \\ \hline \\ \hline \end{array}$$

- (b) Find the value of  $y$  if  $102y = 11_{\text{ten}}$ . (3 marks)

30. Pupils did a test and scored as shown in the table below.

Marks	50	X	45	80
No of pupils	2	6	3	4

(a) How many pupils did the test?

**(2 marks)**

(b) If their mean Mark was 61, find the value of x.

**(3 marks)**

31. (a) By selling a computer set at sh.880,000, Yolanda realized she had made a loss of 20%. At what amount did she buy the computer set? **(3 marks)**

(b) Express  $2\frac{1}{2}$  kg as a percentage of 300g.

**(2 marks)**

32. Alex drove at an average speed of 56km/hr for 2 hours from Kampala to Iganga.  
He rested for  $\frac{1}{2}$  hour and returned directly to Kampala in only  $3\frac{1}{2}$  hours.

(a) Calculate the average speed for his return journey. **(3 marks)**

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

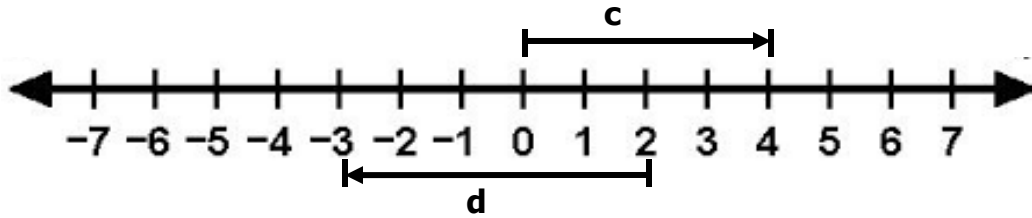
**END.**

**SECTION A ( 60 MARKS)**

1. Add:  $149 + 31$
  
  
  
  
  
  
  
  
  
  
2. Simplify:  $4m - 3m + m$ .
  
  
  
  
  
  
  
  
  
  
3. Write XCIX in Hindu Arabic numerals.
  
  
  
  
  
  
  
  
  
  
4. Write 88018 in words.
  
  
  
  
  
  
  
  
  
  
5. Express 0.7 as a fraction.
  
  
  
  
  
  
  
  
  
  
6. Find the next number in the sequence  $\frac{1}{3}, \frac{1}{6}, \frac{1}{12}$  \_\_\_\_\_
  
  
  
  
  
  
  
  
  
  
7. Simplify:  $+6 - ^{-}4$ .

8. The base area of a cube is  $36\text{cm}^2$ . Calculate the volume of the cube.
9. Round off 13961 to the nearest thousands.
10. Workout :  $\frac{5}{9} \div \frac{1}{3}$
11. Given that set  $A = \{1, 3, 5, 7, 9\}$  and Set  $B = \{2, 3, 5, 7\}$  find  $n(A \cap B)$ .
12. Work out:  $110_{\text{two}} + 11_{\text{two}}$
13. A die is tossed once. What is the probability that a number greater than 3 will appear on top?

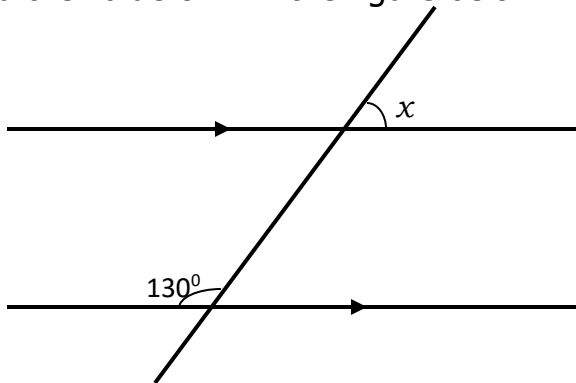
14. What integers are represented by letters **c** and **d** on the number line below?



**c**.....

**d**.....

15. Find the value of **x** in the figure below.

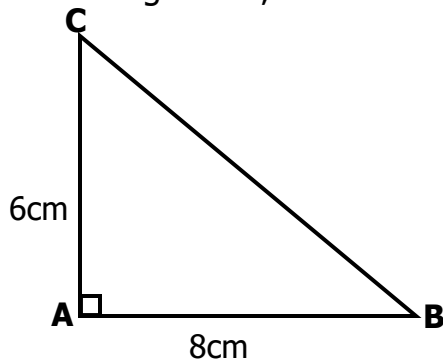


16. Solve:  $3 - n = 2n$

17. If the circumference of a circle is 22cm, find its radius. (Take  $\pi = \frac{22}{7}$ )

18. Mary has a bundle of five thousand shilling notes numbered consecutively from **AB534201** to **AB534300**. How much money does she have?

19. In the triangle ABC, find the length BC.



20. The exterior angle of a regular polygon is  $60^\circ$  more than the interior angle. Find the exterior angle.

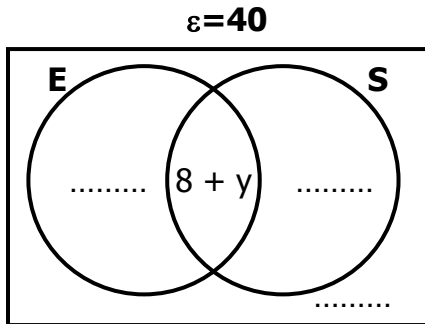


### **SECTION B.**

21. In a class of 40 pupils, 17 like English (**E**) only 9 like Science(**S**) only,  $8 + y$  like both English and Science and  $y$  do not like any of the two subjects.

(a) Complete the Venn diagram.

**(3 mks)**



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

**(2mks)**

22. The manager of Samex hotel went to the market and bought the following items.

4kg of rice at shs. 4000 per kg.

4 kg of sugar at sh. 24000

5 litres of milk at shs. 4000 per litre.

(a) What was her total expenditure for all the items?

**(4mks)**

(b) If she had two “fifty thousand shilling” notes, what was her change?(**1 mk**)

23. (a) Using a ruler, pencil and a pair of compasses only, construct a triangle **PQR** where by **PR = 7cm**, angle **QPR = 60°** and angle **PRQ = 30°**. ( 4mks)

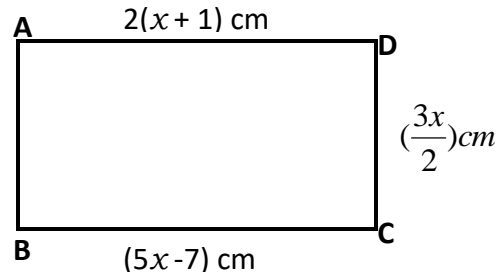
(b) Measure angle PQR. (1mk)

24. Sarah got the following marks in a series of mathematics tests.  
40, 20, 44, 50, 50, 44, 26, 44.

(a) Calculate the modal mark. (2 mks)

(b) Find the mean mark. ( 2mks)

25. The diagram below is a rectangle. Study it and answer the questions that follow.



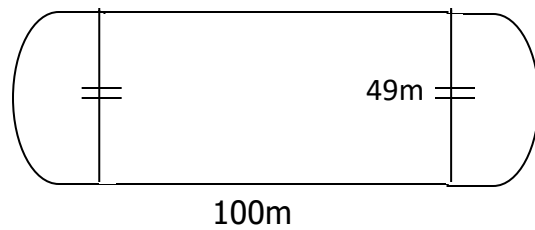
(a) Find the value of  $x$ . **(3mks)**

(b) Find the area of the rectangle. **(3 mks)**

26. (a) Work out:  $\frac{2.7 \times 4.8}{2.4 \times 3.6}$  **(3mks)**

(b) Simplify:  $1 \frac{1}{6} \times 1 \frac{1}{7} \div 2 \frac{1}{3}$  **(2mks)**

27. The diagram below shows a sports field of length 100m, with semicircular ends of diameter 49m.



- (a) What is the perimeter of the field? (Take  $\pi = \frac{22}{7}$ ) **(3mks)**

- (b) Calculate the area of the field. **(3mks)**

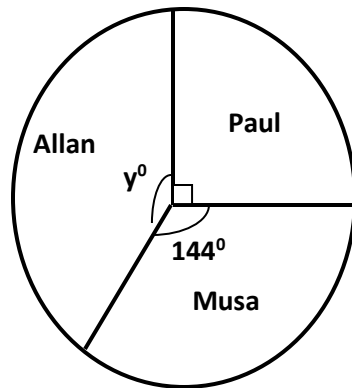
28. John spent  $\frac{1}{3}$  of his money on books and  $\frac{1}{6}$  of the remainder on transport.

- (a) What fraction of his money was left? **(3mks)**

- (b) If he was left with shs. 20,000, how much did he have at first? **(2mks)**

29. **Study the pie chart below and answer the questions that follow.**

A pie chart about piggery project.



(a) Calculate the value of angle  $y$ . **(2mks)**

(b) If Paul contributed shs. 60,000 towards the piggery project, how much money did they contribute altogether? **(3mks)**

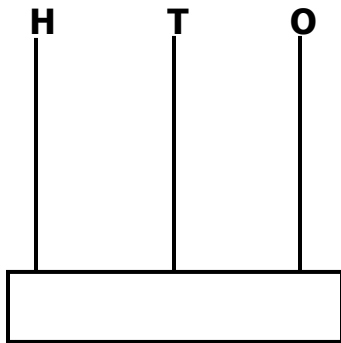
30. A taxi leaves Kampala at 9:15a.m and reaches Ntungamo at 12:15pm. The same taxi leaves Ntungamo at 1:30pm and back to Kampala at 1:45pm. If the distance from Kampala to Ntungamo is 270km;

(a) Calculate the average speed of the taxi from Kampala to Ntungamo. **(3 mks)**

(b) Calculate the total time taken by the taxi to make the two trips. **(2mks)**

(c) Work out the average speed for the two journeys. **(2mks)**

31. (a) On the abacus below, draw the beads to show the number 302. **(2mks)**

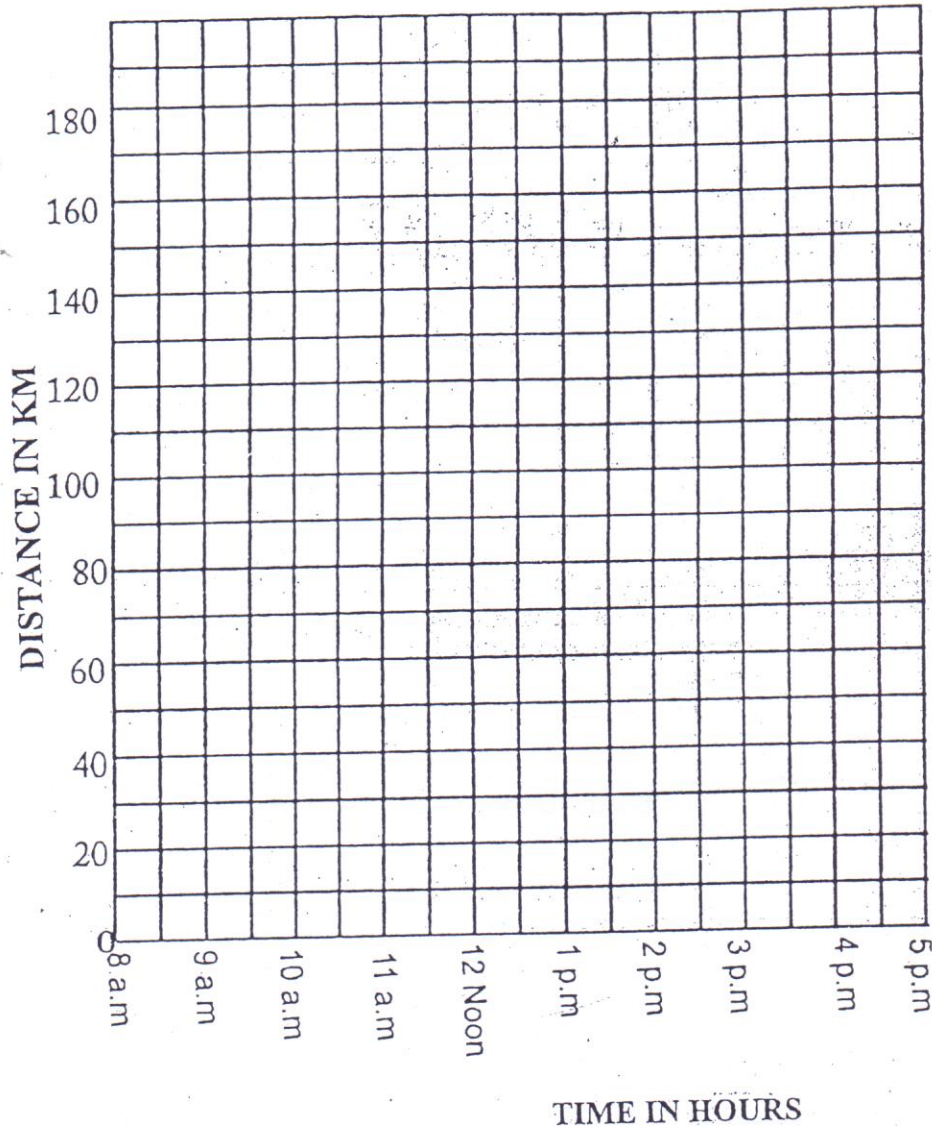


(b) Write 3409 in standard form. **(1 mk)**

(c) What is the place value of 4 in the number 240? **(1mk)**

32. Joan left town **X** at 8:00am and drove at 90km/hr for 1 hour to town **Y**. She rested for  $\frac{1}{2}$  an hour at town **Y**. She left town **Y** and drove for 1 hour at 60km/hour to town **Z**. She rested for  $\frac{1}{2}$  an hour at town **Z**. She then left town **Z** and drove back to town **X** at a steady speed of 50km/hour.

(a) Draw Joan's journey on the graph provided. **(2mks)**



(b) Work out Joan's average speed for the whole journey. **(3 mks)**

**END.**



## **SECTION A(40 MARKS)**

1. Multiply:  $3 \times 3 \times 3$ .
  
  
  
  
  
  
  
  
  
  
2. Simplify:  $-6 - +6$
  
  
  
  
  
  
  
  
  
  
3. Write 94 in Roman numerals.
  
  
  
  
  
  
  
  
  
  
4. If today is a Tuesday, the non-teaching staff is paid their salary, what day of the week will their next pay be, 30 days from today?
  
  
  
  
  
  
  
  
  
  
5. St. Peter Primary School has a total of 300 pupils. If there are 180 boys in the school, what is the ratio of girls to boys?
  
  
  
  
  
  
  
  
  
  
6. Mercy banked sh.100,000 in Bank of Africa at a simple interest rate of 12% per annum. What interest did she earn after 8 months?

7. Solve:  $3p^2 = 48$

8. Two bells ring at intervals of 30 minutes and 40 minutes respectively. If they start ringing together at 8:00a.m, after how many minutes will they ring together again?

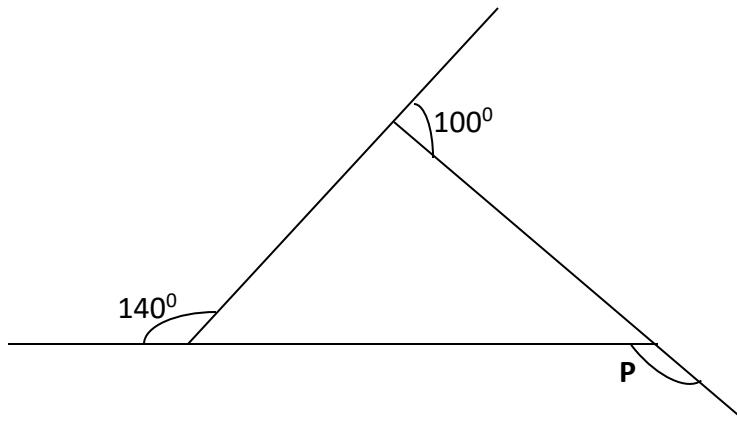
9. Drop a perpendicular line from point P to line XY below.

• P

X ————— Y

10. Find the next number in the sequence below: 27 , 9, 3, 1, .....

11. Find the size of angle P in the diagram below:



12. If  $x = 2$ ,  $y = 1$  and  $z = 0.5$ , Calculate  $\frac{xy}{z}$

13. If set  $A = \{0, 2, 4, 6, 8\}$  and set  $B = \{1, 2, 3, 4, 9\}$  Find  $A - B$

14. Given the numeral 38.47, find the product of the place value of 3 and 4.

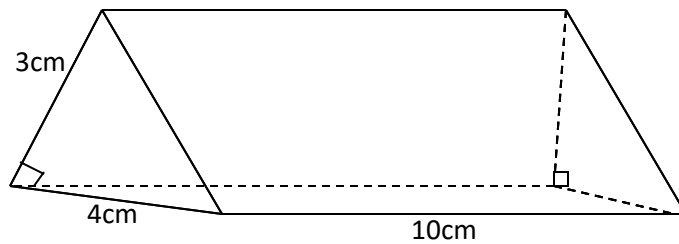
15. A girl read  $\frac{1}{3}$  of a book on Monday and  $\frac{2}{5}$  of it on Tuesday and she remained with 20 pages to read. How many pages has the book?

16. Divide:  $\frac{2}{5}$  by  $\frac{1}{2}$ .

17. At an average speed of 60km/hr, a car covered a distance of 270km. Calculate the time it took to cover that distance.

18. A pair of shoes priced at sh.50,000 was sold to a customer at a discount of 20%. How much money did the customer pay for the shoes?

19. Calculate the volume of the figure below.

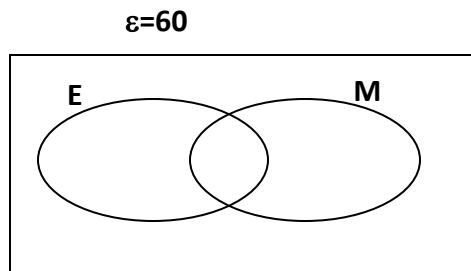


20. Express 12.30a.m in a 24 hour clock.

**SECTION B (60 MARKS)**

21. In a class of 60 pupils, 25 like English (E) , X like Mathematics(M) only, 20 like both English and Mathematics. 5 pupils do not like any of those two subjects.

(a) Complete the Venn diagram below using the information given above. (2 marks)



(b) Find the value of x.

( 3 marks)

(c) What is the probability of picking at random one of the pupils who like only one subject? **(1 mark)**

22. (a) Solve:  $5t - 2(t + 1) = 1$  **(3 marks)**

(b) Solve the inequality:  $-2p + 4 > 6$  **(3 marks)**

23. Wambwa scored the following marks in a number of Mathematics tests:

75, 80, 60, 70, 45, 50 Find the:

(a) Range in the marks. **(1 mark)**

(b) Modal frequency **(1 mark)**

(c) Mean mark **(3 marks)**

24. Using a pair of compasses, a ruler and a pencil only;

(a) Construct a triangle ABC in which  $BC = 8\text{cm}$ ,  $\angle ABC = 90^\circ$  and  $\angle BCA = 30^\circ$ .

**(4 marks)**

(b) What is the area of triangle ABC?

**(3 marks)**

25. Rubongi drove from Kampala to his village at an average speed of  $90\text{km/hr}$  for  $3\frac{1}{3}$  hrs.

(a) How far is Rubongi's village from Kampala?

**(2 marks)**

(b) Calculate his average speed for both journeys.

**(3 marks)**

26. A regular polygon has an exterior angle of  $45^\circ$ .

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

**(2 marks)**

(b) Calculate the sum of its interior angles.

**(2 marks)**

27. (a) Express  $0.3636\dots$  as a common fraction.

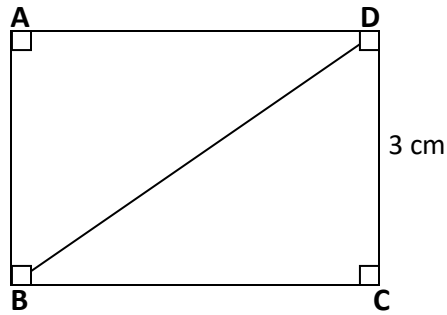
**(2 marks)**

(b) Express 500m as a percentage of 4km

**(2 marks)**



28. The width of the rectangle ABCD below is 3cm. Its perimeter is 14cm. Use it to answer the questions that follow.



(a) What is its length? **(2marks)**

(b) Calculate the diagonal  $\overline{BD}$ . **(2 marks)**

29. Given two numbers 24 and 30, find their;

(a) Lowest Common Multiple(L.C.M) **(2 marks)**

(b) Greatest Common Factor (G.C.F) **(2 marks)**

30. A businessman has 200 bags of maize flour each weighing 50kg.

(a) Find the total weight of the bags in tones.

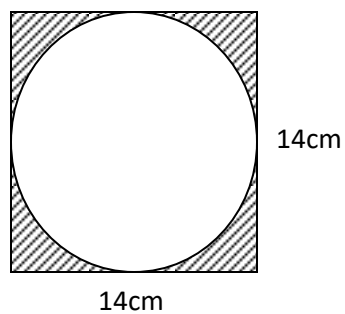
**(2 marks)**

(b) If a pick up carries 2 tones per trip, work out the number of bags the pick-up will carry in one trip.

**(2 marks)**

31. Work out the area of the shaded part of the given figure.

**(4 marks)**



32. A piece of land is used as follows:

5 hectares for growing maize.

10 hectares for keeping animals.

20 hectares for growing matooke.

25 hectares for growing sugar cane.

Represent the above information a pie chart (Use radius of 4cm)

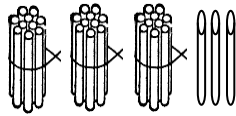
**(7 marks)**

**END.**

## **SECTION A**

1. Add:  $33 + 6$

2. Write the number that is represented by the bundles.



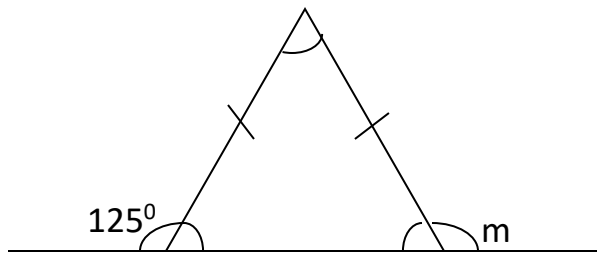
3. A chameleon takes 45 minutes to move round a tree. How many minutes does it take to move round the tree four times?

4. Simplify:  $2(3k - g) - 3(k - g)$

5. Draw a Venn diagram to show that all the hens (**H**) are birds (**B**).

6. A shop keeper bought a dress at ash.18000 and sold it at a profit of 20%. What was the selling price of the dress?

7. Find the value of **M** in the figure below:



8. Given that  $a = 2$   $b = 3$ . Find the value of  $b^a + a^b$ .
9. Using a protractor, a sharp pencil and a ruler, draw an angle of  $65^\circ$ .

10. Divide 5013 by 3.

11. Convert  $\frac{1}{8}$  to a decimal fraction.

12. Round off 4823 the nearest thousands.

13. If the average of 8 , p and 11 is 24, find their median.

14. Nakawunde had bank notes of denomination sh.5000 numbered consecutively from PQ4938461 to PQ4938660. How much money did she have?

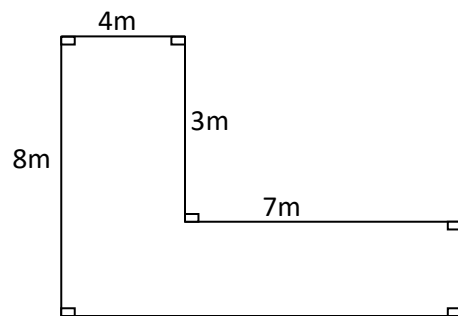
15. Find the next number in the sequence.  $\frac{1}{3}, \frac{1}{6}, \frac{1}{12}, \text{---}$

16. Solve the inequality  $3 - K < 10$

17. Change  $1101_{\text{two}}$  to base ten.

18. Set **A** = {the first five composite numbers} Set **B** = {even numbers less than 10}  
Find  $A \cup B$ .

19. Work out the perimeter of the plot drawn;



20. At 60km/hr, John takes 2 hours to cover a journey. How long will he take to cover the same journey at 40km/hr?

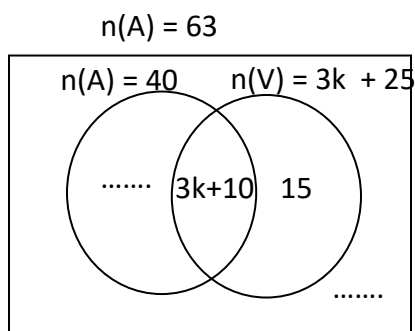
### SECTION B.

21. (a) Express  $33\frac{1}{2}\%$  as a common fraction in its lowest terms. **(2 marks)**

(b) Evaluate :  $\frac{0.8 + 2.24}{1.2 - 0.8}$  **(3 marks)**

22. At a sports competition attended by 63 participants, 40 participated in athletics (**A**). 15 participated in volleyball (**V**) only,  $(3k + 10)$  participated in both athletics and volleyball while  $4k$  did not participate in any game.

- (a) Use the above information to complete the Venn diagram below. **(2 marks)**



- (b) Find the value of K.



(c) What is the probability of picking a participant who participated in athletics?  
**(1 mark)**

23. (a) Multiply  $110_{\text{two}} \times 11_{\text{two}}$ . **(2 marks)**

(b) Write 36.7 in scientific form. **(1 mark)**

(c) Write 457 in Roman numerals. **(2 marks)**

24. In a regular polygon the interior angle is  $120^\circ$ .

(a) What is the size of each exterior angle? **(2 marks)**

(b) Calculate the interior angle sum of the polygon. **(3 marks)**

25. A school used  $\frac{1}{2}$  of water in the tank on Monday,  $\frac{2}{3}$  of the remainder on Tuesday and the rest on Wednesday.

(a) What fraction of the water did the school use on Wednesday? **(3 marks)**

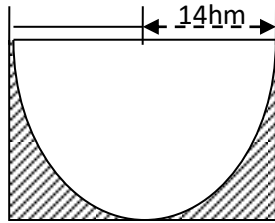
(b) If the school used 900 litres on Wednesday, how much water was in the tank altogether? **(2 marks)**

26. If  $x = -2$ ,  $y = 3$  and  $z = -4$ .

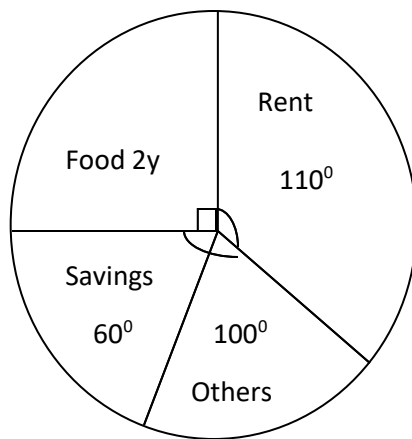
(a) Find the value of  $\frac{2yz}{xy}$  **(2 marks)**

(b) Solve  $\frac{2y-4}{4} = \frac{3y+3}{4}$  **(3 marks)**

27. Find the area of the shaded part in the square below taking pi as  $3\frac{1}{7}$ . **(5 marks)**



28. The pie chart below shows how Mr. Mwendha uses his monthly salary of shs.2,800,000.



- (a) Calculate the value of y. **(2 marks)**

- (b) How much money does he spend on food? **(2 marks)**

(c) What fraction of his salary does he save?

**(1 mark)**

29. The time table below shows how a vehicle moved through various places at different points of time.

Place	Arrival time	Departure time
A		0715 hours
B	0900 hours	0930 hours
C	1259 hours	1314 hours
D	1415 hours	

(a) At what time in 12 hour clock notation did the vehicle arrive at place **C**?

**(1 marks)**

30. Two bells ring at intervals of fifty minutes and forty minutes respectively. If they both first ring at 11:40a.m.

(a) after how long will they ring together again?

(b) at what time will they ring together again in 24 hour clock?

31. Irene, a good maid, went to the shop with sh. 24,000 and bought items as shown below.

(a) Complete the table below.

ITEM	QUANTITY	COST	AMOUNT
Sugar	$3 \frac{1}{7}$ kg	Shs.700 per $\frac{1}{7}$ kg	Sh.....
Meat	.....kg	Shs.11000 per kg	Shs.5500
Rice	3.5kg	.....per kg	Shs 7000
Total expenditure			Shs.

(b) If she was given a discount of 15% on all the items, Find her change.

32. Town B is 6km North of town C and town B is 5km away from town A on a bearing of  $115^{\circ}$ .

(a) Draw a sketch to show the above towns.

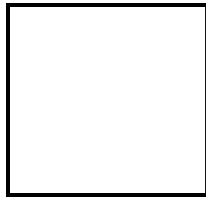
- (b) Using a scale of 1cm to represent 1km, draw an accurate diagram to show the above towns.
- (c) Find the bearing of town A from C.

## SECTION A.

1. Work out:  $44 + 10$

2. Write the single number that has been expanded to get  $5000 + 80 + 3$ ?

3. Draw all possible lines of folding symmetry in the figure below.



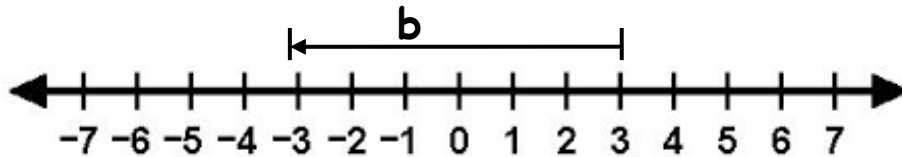
4. Set  $A = \{ \text{⊕}, \triangle, \square, 8, B \}$  How many members are in set A?

5. The cost 3 books is sh.9000. What is the cost of 5 similar books?

6. Subtract 0.3 from 1.

7. Subtract  $y - 2$  from  $2y - 4$

8. Find the value  $b$  using the numberline below.



9. The area of a rectangle is  $72\text{cm}^2$ , Find the length if its width is 6cm.

10. Without dividing, show that 3751 is divisible by 11.

11. Find the number that has been prime factorized.

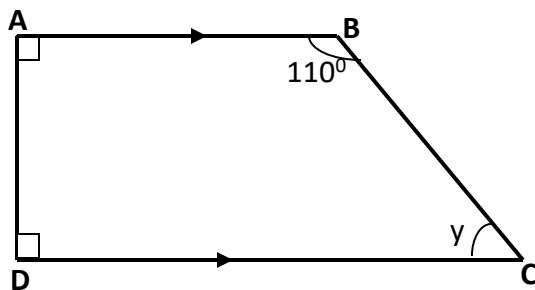
12. Find the median of -3, -2, 0, 3, -1, 2



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

14. In a garage there are 5 green cars and 9 white cars. What is the probability of picking a green car?

15. Find the value of  $y$ .

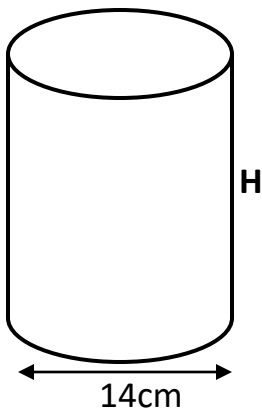


16. Today is Monday, what day of the week was it 12 days ago?

17. Construct the complement of  $60^\circ$ .

18. Write 606,009 in words.

19. The volume of the cylinder below is  $1540\text{cm}^3$ . Find its height(H).



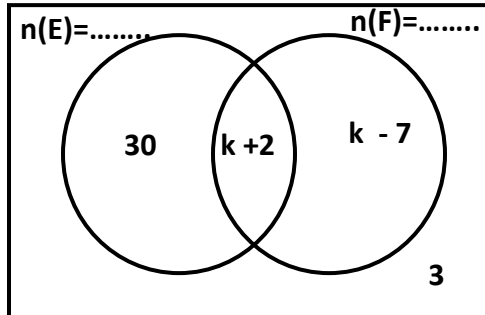
20. The sum of three consecutive counting numbers is 186. Find the largest number.

## SECTION B.

21. The Venn diagram below shows number of people who speak English (E) and French (F) and other languages. Study it to answer the questions that follow.

(a) Complete the Venn diagram.

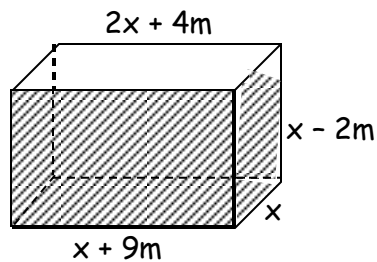
(2 marks)



(b) If 15 people speak French, find the number of people who speak English only.

(3 marks)

22. Study the diagram and answer the questions that follow.



(a) Find the value of  $x$ .

(b) Find the surface area of the shaded region.

(c) Work out its volume.

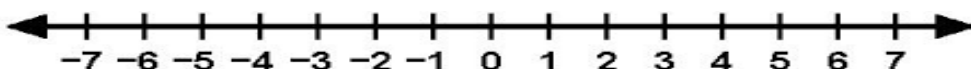
23. (a) Moses bought ice cream at a temperature of  $-5^{\circ}\text{C}$  from a supermarket. By the time he reached home, the ice cream temperature had risen to  $7^{\circ}\text{C}$ . Find the temperature increase in the ice cream.

(b) Simplify  $-5 + +7$ .

(2 marks)

(c) Show  $2 \times 4$  on a number line.

(1 mark)

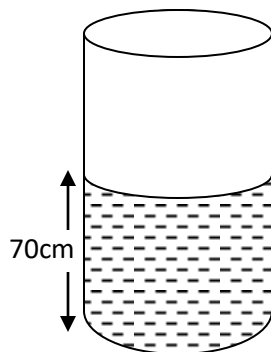


24. Given the table below, use it to answer the questions that follow.

Item	Quantity	Unit Cost
Pencils	13	Sh. 5000
Books	5	Sh.1200
Geometry set	1	Sh.2500
Mats	2	Sh.7500

If Muna went with 2, fifty thousand shilling notes and bought all the items, how much was her change?

25. Below is a water tank whose circumference of one of the circular end is 88cm.



(a) Find the radius.

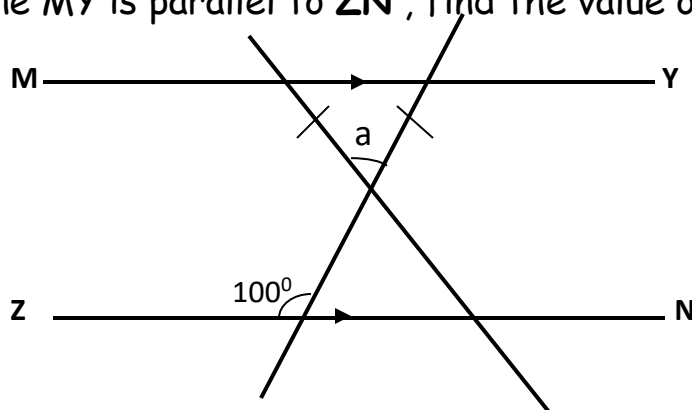
(3 marks)

(b) Work out the capacity of water in the tank.

(3 marks)

26. (a) Line MY is parallel to ZN, find the value of  $a$ .

(2 marks)



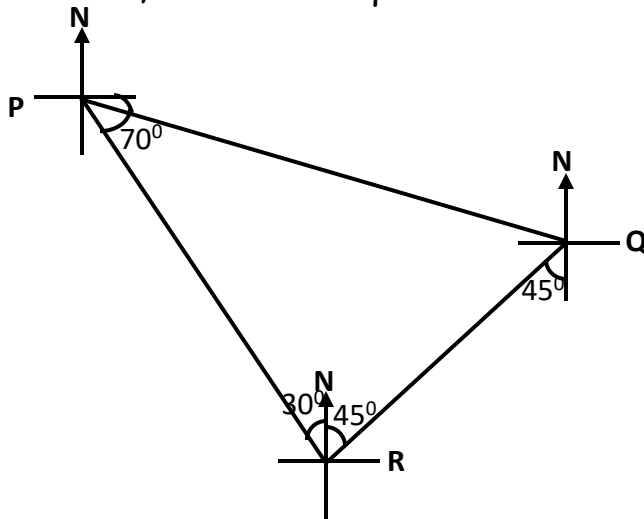
(b) The interior angle of a polygon is  $144^\circ$ . Name the polygon. (3 marks)

27. In a school of 1800 pupils, 70% are girls and the rest are boys. The ratio of boys who are dancers to singers is 4:5 respectively and  $\frac{1}{6}$  of the girls are singers while the rest are dancers.

Find the total number of pupils who are singers in the whole school.

**(5marks)**

28. Given 3 towns, answer the questions that follow.



(a) What is the direction of Q from P?

**( 1 mark)**

(b) Find the bearing of R from Q.

**( 2 marks)**

- (c) What is the ordinary bearing of R from Q? (2 marks)

29. Use the forex rates below to answer the questions below.

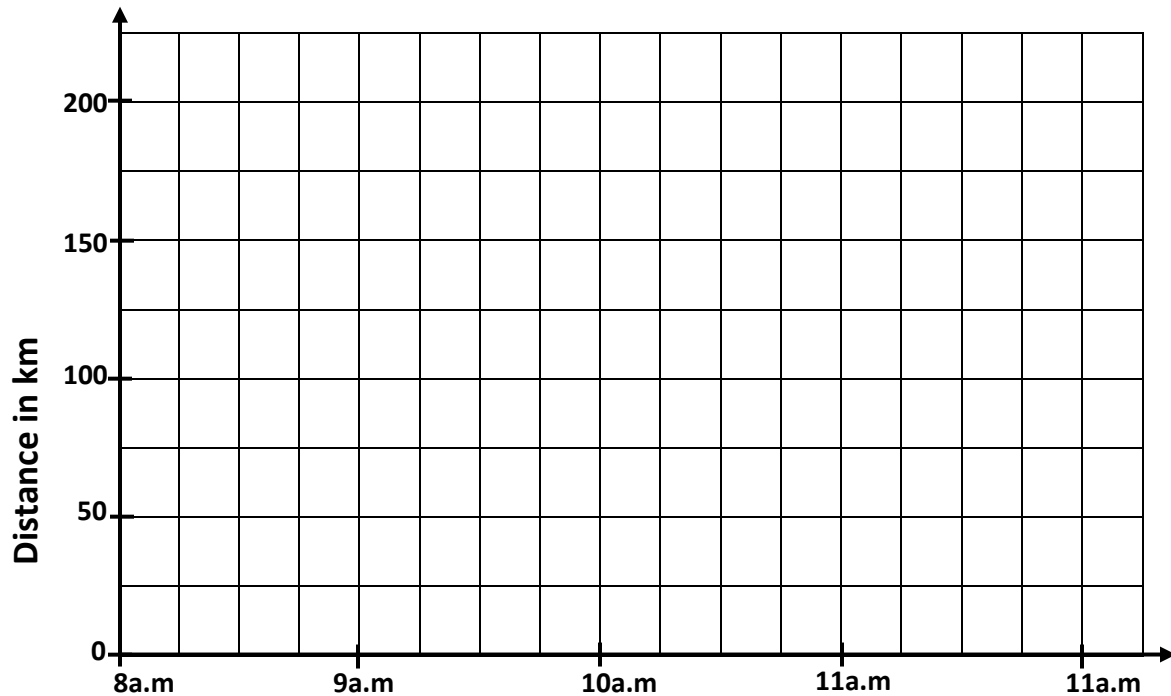
Currency	Buying rate	Selling rate
Dollars	Ug.sh.3600	Ug.sh.3620
Kenya shillings	Ug. Sh. 35	Ug. Sh. 36

- (a) John has 15 dollars and 160 Kenya shillings, how much in Uganda shillings does he have altogether?

- (b) A businessman wants to buy a phone which costs Ug.shs. 260640. How many dollars will he need?



30. A car left town **A** at 8:45a.m travelling at a speed of 100km/hr for 30 minutes and reached town **B**. At **B** it got a puncture and the repairing took 30 minutes and continued the journey at a speed of 75km/hr for 2 hours.
- (a) Show the journey of the car on the graph below.



31. The table below shows marks scored in a test. Study it and answer the questions that follow.

Marks	60	80	90	75
Frequency	2	3	1	4

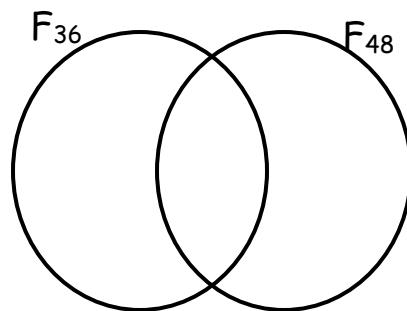
- (a) How many pupils did the test? 0.0.-

- (b) Find the median.

(c) Calculate the mean.

32. (a) Prime factorise 36 and 48 and write the prime factors using subscripts.

(b) Represent the prime factors on the Venn diagram below.

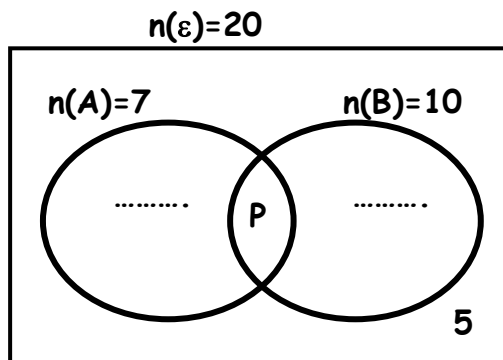


(c) Use the Prime factors on the venn diagram to find the LCM of  $F_{36}$  and  $F_{48}$ .

**END.**

## SECTION A

1. Work out:  $9 \div 3$
2. Write "Ninety thousand forty" in words.
3. Simplify;  $5t - 3m + 2m - 2t$ .
4. Find the value of  $P$  in the diagram below.



5. Double the next number in the sequence.  
17, 13, 9, 5, .....

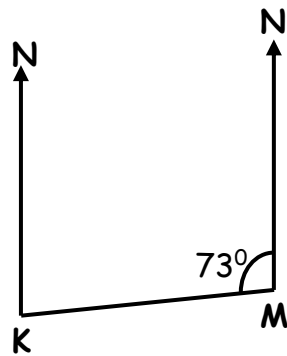
6. Work out  $\frac{5}{9} \div \frac{1}{3}$

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

8. A bucket of sugar weighs 4.kg. Express the mass of sugar in grammes.

9. Write 69800 in scientific notation.

10. Find the bearing of **K** from **M** in the diagram below.



11. A man had a glass which was  $\frac{3}{5}$  full of Juice. She gave  $\frac{1}{2}$  of it to her sister. What fraction of the Juice did she remain with?

12. Subtract  $3y - 4$  from  $7y + 2$ .

13. Given  $Q = \{ \square, \triangle \}$ , find the number of subsets.

14. The mean of the scores 8, 7, 6, 5(a - 6) is 6. Find **a**.

15. Using a pair of compass construct parallel lines of distance 3cm between.

16. Find the sum of prime numbers between 10 and 30.

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

18. How many  $\frac{1}{5}$  litre containers can be filled from a 20 litre Jerrican of paraffin?

19. Round off 3074 to the nearest hundreds.

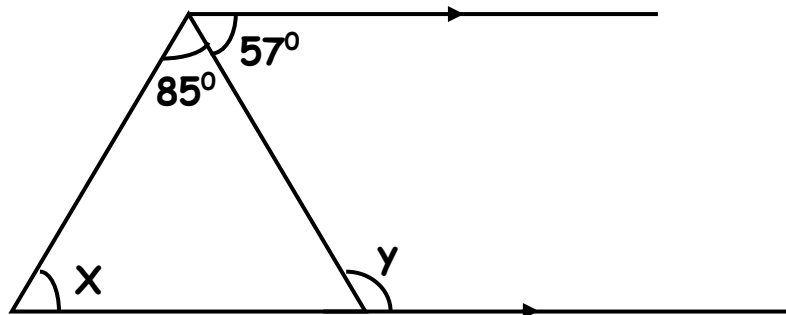
20. Six men constructed a bridge in 24 days each earning shs. 5000 per day. Work out the amount of money paid to the six men.

**SECTION B.**

21. (a) Simplify:  $\frac{1}{3} - \frac{2}{3} + \frac{5}{8}$

(b) Work out  $\frac{0.14 - 0.07}{0.07}$

22. Given the figure below.



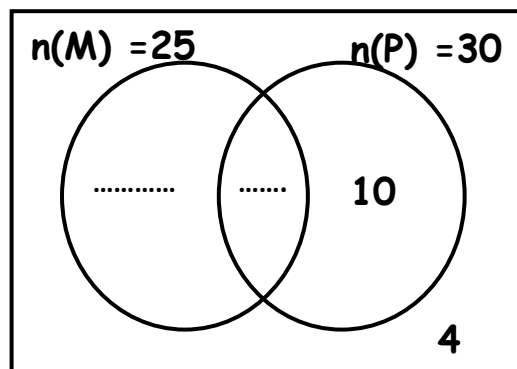
(a) Find the value of  $x$ .



(b) Calculate the angle marked Y.

23. In a class of 40 pupils, 25 drank Mirinda (M), 30 drank Pepsi (P) and 4 drank neither of the two.

(a) Complete the Venn diagram.



(b) What is the probability of picking a pupil who drank only one drink to lead a song?

24. A school tank is 24,000 litres of water when full. If  $\frac{3}{4}$  of it were drawn;

(a) How many litres remained in the tank?

(b) Find the percentage of water drawn from the tank.

25. A man is three times as old as his son. In 10 years time , their total age will be 56 years.

(a) How old is the son now?

(b) Find the product of their ages in 10 years time.

26. (a) Using a pair of compass, a sharp pencil and a ruler only, construct a parallelogram KLMN where  $KL = 5.5\text{cm}$  and  $LM = 4\text{cm}$  and  $\angle NKL = 60^\circ$ .

(b) Measure the length of diagonal KM.

27. A security guard's wage was increased by 10% to shs. 107,000 per month.

(a) Find his old wage.

(b) If his new wage of shs. 107,000 was decreased by 5%. Find his new wage.

28. The interior angle of a regular polygon is 4 times the exterior angle.

(a) Find the size of the exterior angle.

(b) Work out the sum of the interior angles.

29. (a) Work out  $2\ 3\ 4_{\text{five}}$

$$\begin{array}{r} 2\ 3\ 4_{\text{five}} \\ -\ 1\ 2_{\text{five}} \\ \hline \end{array}$$

(b) Express 4063 in expanded form using indices.

30. The time table below shows the movement of a bus from Mombasa to Kampala. Study it carefully and answer the questions that follow.

TOWN	ARRIVAL	DEPARTURE
MOMBASA		0100 HRS
NAIROBI	0645HRS	0715 HRS
BUSIA	1515HRS	1130HRS
IGANGA	1530HRS	1555HRS
KAMPALA	1755HRS	

(a) How long does the bus take to move from Mombasa to Nairobi?

(b) For how long does the bus stay at Iganga?

(c) Write the arrival time of the bus at Kampala in the 12hour clock.

31. A motorist drove from town **M** to town **N** at a speed of 90km per hour for 3 hours. He left town **N** and drove back to town **M** at 10:00 a.m using the same road at a steady speed of 60km/hr.

(a) Find the distance from town **M** to town **N**.

(b) For how long did he drive back to town **M**?

32. (a) Solve  $\frac{2}{3}x + \frac{1}{4}x = 11$

(b) Given that  $a = 2$  and  $b = -2$ . Find the value of  $\frac{2a-b}{a-b}$ .

END.

**SECTION A. (40 marks)**

1. Work out  $18 \div 2$

2. Write  $\frac{9}{10}$  in words.

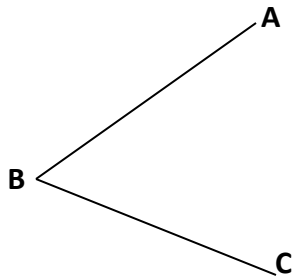
3. Given that  $P = \{2, 3, 4, 5\}$  and  $Q = \{2, 4, 6, 8\}$  find  $n(P \cup Q)$

4. Work out  $\frac{1}{9} \times \frac{3}{4}$

5. Simplify  $6xy - 2xp - xy + 9x p$

6. Find the next number in the sequence 88, 44, 22, 11, .....

7. Bisect the acute angle ABC below.



8. A trader bought a trouser at sh. 85,000. He later sold it and made a loss of sh. 12500. At what price did he sell the trouser?

9. The mass of a packet of coffee is  $\frac{1}{4}$  kg. What is this mass in grams?

10. Work out  $3\ 1\ 2_{\text{five}}$

$- 1\ 3_{\text{five}}$

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11. Given that  $w = 4$  and  $K = -3$ , evaluate  $\frac{2w+k}{5}$

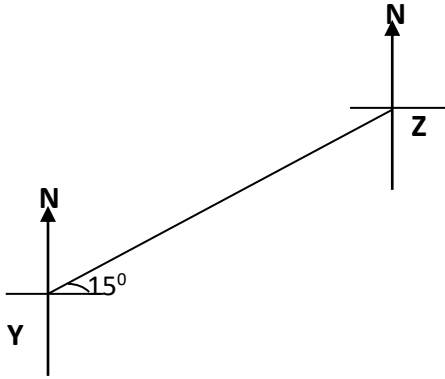
12. The mean age of 7 boys is 11 years. When one boy leaves the group, the mean age becomes 12 years. What is the age of the boy who left the group?

13. Find the square root of  $1\frac{7}{9}$

14. Write the number whose scientific form is  $6.94 \times 10^{-2}$ .

15. A cyclist covers 70km in  $2\frac{1}{2}$  hrs. How long will he take to cover 21km at the same speed?

16. Find the direction of point Y from point Z in the diagram below.



17. Solve  $4^{3m} \div 4^m = 4$

18. Mary slept at 1215 hrs. Express this time in the 12 hour clock.

19. A man got a loan of sh. 120,000 from micro-finance at a simple interest rate of 8% per annum. He paid an interest of sh. 7,200 on the loan. How long was the loan?

20.  $33\frac{1}{3}\%$  of a number is 72. What is the number?

21. A water metre reading at the beginning of the month was 123456 and 123556 at the end of the month.

(a) How many units were used that month?

(b) If each unit cost shs. 690, calculate the water bill for the month.

22. (a) Work out  $\frac{3.9+3.6}{0.5 \times 0.03}$

(b) Simplify  $3\frac{1}{6} \div 2\frac{1}{2} \times 2\frac{2}{5}$

23. (a) Using a ruler, a sharp pencil and a pair of compasses only, construct a triangle ABC in which  $AB = 8\text{cm}$ ,  $\angle BAC = 75^\circ$  and  $\angle ABC = 45^\circ$ .

(b) Drop a perpendicular line from C to meet AB at K . Find the area of the triangle ABC.

24. (a) Complete the tally table below.

Mark	Tally	Frequency	Total
60	//	.....	120
40	.....	6	.....

(b) If  represents 4000 houses, draw pictures to represent 12,000 houses.

25. (a) Paul is 20 years old and Mary is 6 years old. After how many years will Paul be twice as old as Mary?

(b) How old will Mary be then?

26. A game park wants to fence a circular field of diameter 28m using poles placed at intervals of 80cm.

(a) How many poles are needed to fence the field? (Take  $\pi$  as  $\frac{22}{7}$ )

(b) If each pole costs sh.500, how much money will the game park spend on the poles?

27. The exchange rate for Kenya shillings(Ksh) to Uganda shillings (Ug sh.) and the United state dollars (US\$) to Uganda shillings are shown below;

Ksh. 1 = ug. Sh.30

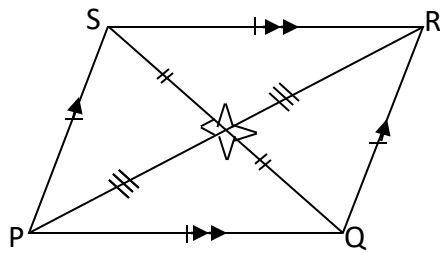
US \$ 1 = Ug.sh. 2580

(a) How many United States dollars will one get from 21500 Kenya shillings?

(b) If the cost of a new bicycle is 110 United States dollars, how much would this be in Kenya shillings?

28. A man drove from Kampala to Jinja at a speed of 60km/hr for 2 hours. He had a meeting which lasted for three quarters of an hour and drove back in 3 hours. Calculate his average speed for the whole journey.

29. Below is a quadrilateral. Study it carefully and answer questions that follow.

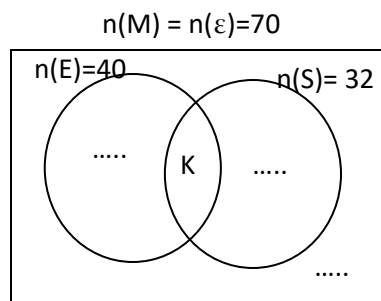


(a) Given that its perimeter is 40cm and diagonal  $\overline{QS} = 12\text{cm}$ , find the length of diagonal  $\overline{PR}$ .

(b) Work out its area.

30. In a class of 70 pupils, all like Mathematics (M), 40 like Mathematics and English (E), 32 like Science and Mathematics like all the three subjects and 3 like only mathematics.

(a) Complete the venn diagram below correctly.



(b) How many pupils like either English or Science?

31. (a) Represent 6073 on an abacus.

(b) Find the product of the value of 8 and the place value of 5 in 9804.15.

32. A wheel of radius of 35cm makes 186 revolutions. What distance does it cover in kilometers?



**SECTION A (40 MARKS)**

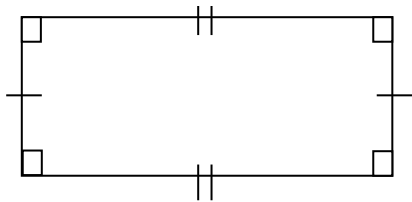
**(Questions 1 to 20 carry two marks each)**

1. Add:  $71 + 25$

2. Solve:  $2y - 1 = 9$

3. Write 38 in Roman numerals.

4. Show the lines of symmetry in the figure below.



5. Work out:  $1.2 \times 1.5$

6. Express 40 gm as a percentage of 2 kg.

7. Work out:  $-3 + -9$

8. Given that set  $A$  has seven proper subsets, how many elements are in set  $A$ ?

9. Write in figures: Ten thousand, forty eight.

10. A test which took  $1\frac{1}{2}$  hours started at 4:45 p.m. At what time did it end?

11. Using a pair of compasses, a ruler and a pencil only, bisect line segment  $KP$ .

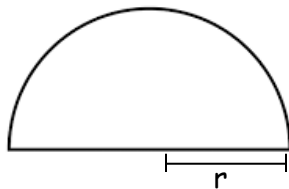


12. In a class of 30 pupils, boys are 10% of the whole class. How many girls are in the class?

13. The probability for a president to win a general election is  $\frac{5}{8}$ . What is the probability that the president will loose the general election?

14. Find the distance all round this semi-circular shape if  $r = 7\text{cm}$ .

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



15. 36 books were shared among John, Grace and Judith in the ratio 3: 1: 2 respectively. How many books did Grace get?

16. Find the average of 8, 0 and 1.

17. Divide:  $912 \div 3$

18. What is the sum of all the prime numbers that are factors of 15?

19. A shopkeeper sold an item at shs.55,000 and made a loss of sh. 17,000.  
How much did she buy the item?

20. Using a ruler, a pencil and a pair of compasses only, construct an angle of  $30^\circ$ .

**SECTION B (60 MARKS)**

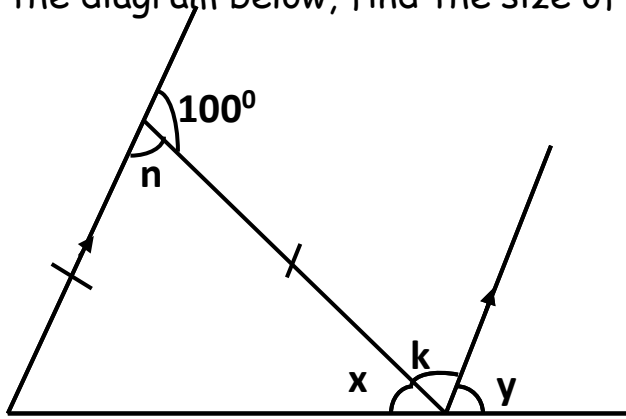
21. (a) Solve:  $2(3x - 1) - (x - 1) = 14$

(b)  $47_n = 133_{\text{five}}$ , find the value of  $n$ .

22. (a) Subtract:  $4.5 - 0.09$

(b) Simplify:  $\frac{0.28 \times 1.4}{0.7}$

23. In the diagram below, find the size of the angles marked;

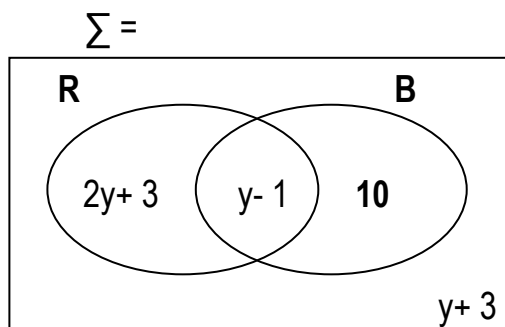


(i)  $n$

(ii)  $x$

(iii)  $y$

24. The Venn diagram below shows the pupils who like red colour (**R**) and blue colour (**B**). Some pupils like other colours.

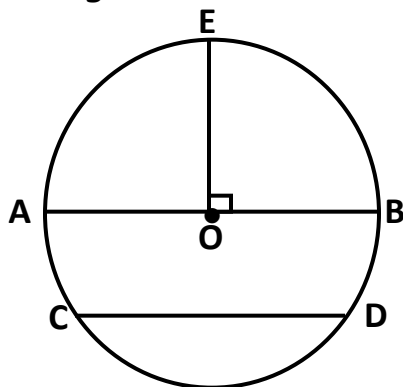


a) Given that the total number of pupils who like red only and those who like other colours is 24, find the value of  $y$ . ( 2 marks)

b) How many pupils like blue colour ? ( 2 marks)

c) What is the probability of choosing a pupil who likes both colours? ( 2 marks)

25. Study the diagram below and answer questions that follow.



(a) Name the diagram.

(b) Name the lines (i)  $OE =$  \_\_\_\_\_

(ii)  $AB =$  \_\_\_\_\_

(iii)  $CD =$  \_\_\_\_\_

26. Grace had some money. She lost  $\frac{1}{2}$  of it and gave  $\frac{1}{2}$  of the remainder to Tiana.

a) Work out the total fraction of the money removed from her original money. (3 marks)

b) What fraction of the money was Grace left with?

27. Below is the timetable of Fasto Bus Services, travelling from Kampala to Gulu.

Town	Arrival	Departure
Kampala		6:50 am
Bombo	8:10 am	8:30 am
Nakasongola	10:15 am	10:45 am
Kigumba	11:15 am	11 : 40 am
Karuma	12 : 10 pm	12 : 50 pm
Gulu	1 : 35 pm	

(a) How long did the bus take to travel from Nakasongola to Kigumba?



(b) How long did the bus take to rest at Bombo?

(c) If the distance between Kampala and Gulu is 459km, calculate the average speed of the bus in km/hr.

28. The following goals were scored by a certain football team in a series of matches: 75, 63, 34, 75, 42 and 53.

(a) What was their modal score?

(b) Find their median score.

(c) What was the mean number of goals they scored?

29. Agaba lives 15 km North of Tusi's home and Kibuna lives 18km East of Agaba's home.

a) Draw a sketch diagram to show the location of their homes. (2 marks)

b) Using a scale of 1cm to represent 3km, draw an accurate diagram showing their homes.

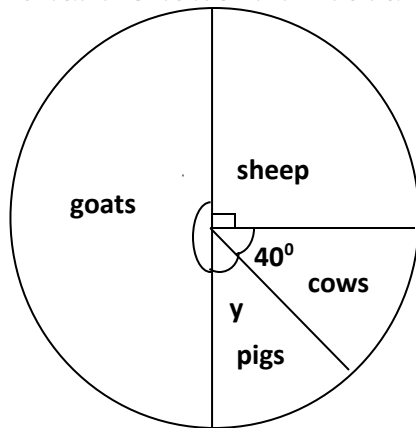
c) How far in km is Tusi's home from Kibuna's home?

30. A classroom floor measuring 5.4 metres by 4.2 metres was renovated with square tiles measuring 30 cm to cover the floor. How many tiles were used?

31. (a) Subtract;  $(x - y)$  from  $(y + x)$

(b) Find the value of  $n$ , if  $\frac{3n - 2}{2} = 7$  ( 3 marks)

32. The pie-chart shows the total number of animals on a farm.



a) Find the value of  $y$ .

b) If the farm has 20 cows how many animals are on the farm?

c) How many more goats than pigs are on the farm?

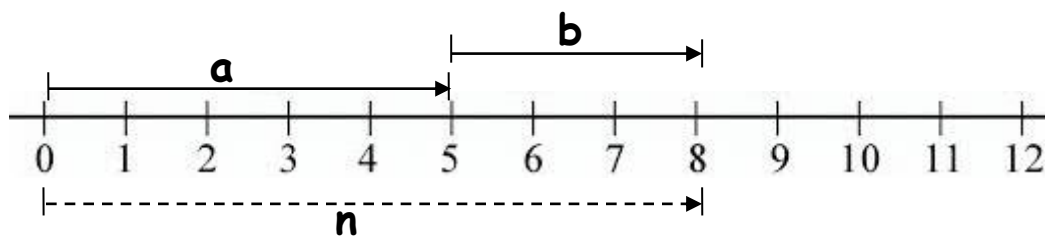
## SECTION A.

1. Multiply 24 by 2.

2. Simplify:  $\frac{2}{3} : \frac{1}{2}$

3. Find the next two numbers in the sequence below: 64, 27, 8, 1, \_\_\_\_\_, \_\_\_\_\_

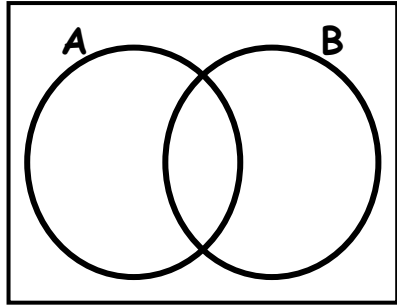
4. Write down the mathematical statement shown on the numberline below.



5. Solve:  $(1 \div 2a^2) = (5 \div a)$

6. Write the number  $\text{IIII IIII IIII III}$  in Roman numerals.

7. On the Venn diagram below, shade the region of  $(A \cap B)^1$

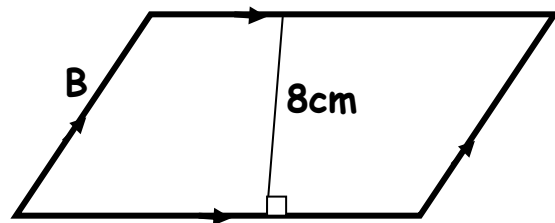
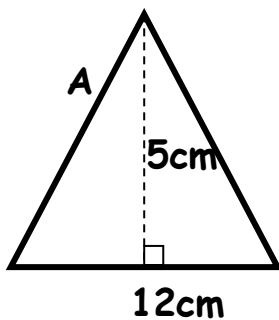


8. A mobile phone consumes 20% of its battery power in 6 hours. How many days does the battery power last when fully charged?
9. Mulimi sold 5 litres 800ml of milk on Monday and 3 litres 300ml on Tuesday. How much milk did we sell altogether?
10. Sarah fixed circular beads along their diameter of 0.5cm each on a thread 0.6m long to make a necklace. How many beads did she use?

11. Find the angle which is  $80^\circ$  less than its supplement.
12. Write  $344_{\text{five}}$  in expanded form using values.
13. The square of a number is 25. Find the number.
14. The average age of 4 girls is 12 years. If the twins join them, their average age becomes 10 years. How old are the twins?
15. Balamu is standing on a bearing of  $075^\circ$  from Sarah. What is the direction of Sarah from Balamu?

16. A pen costs as much as 2 pencils while a book costs as much as a pen and a pencil. What is the cost of a pen if a book costs shs. 900?

17. The area of the figure A and B are in the ratio 5:16. Find the area of figure B.



18. Convert 19.999 to the nearest hundredth.

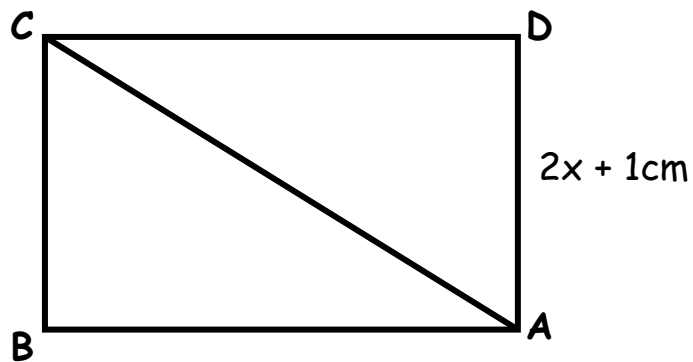
19. Mariam tossed two coins at the same time. What is the chance that she got at least a tail showing up?



20. There are 120 cows on Malinga's farm. Each cow produces 20 litres of milk daily. If the milk is packed in half litre packets, how many packets of milk does he get daily?

**SECTION B**

21. The figure ABCD below is a rectangle. Diagonal AC = 13cm and AB = 12cm.



- (a) Find the value of X. (4 marks)

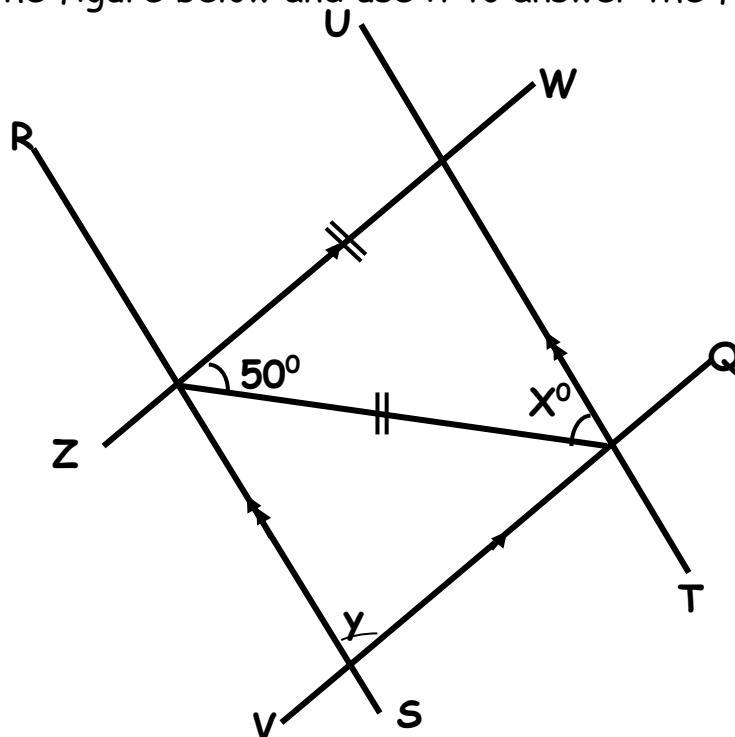
- (b) Work out the surface area of figure ABCD. (1 mark)

22. (a) A basket is  $\frac{2}{3}$  full of rice and when 8kg are added, it becomes  $\frac{3}{4}$  full.

What is the mass of a full basket of rice if an empty basket weighs 2kg?  
(3 marks)

(b) Bosco is 120kg heavier than John and their total mass is 120kg, how heavy is Bosco?  
(2 marks)

23. Study the figure below and use it to answer the following questions.



(a) Find the value of X.

(2 marks)

(b) Find the size of angle marked y.

(2 marks)

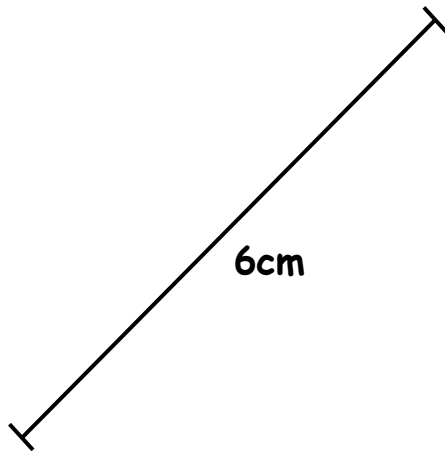
24. The table below shows the price list of different items sold at Jomi Shopping Centre.

ITEM	COSTS
A radio set	US \$ 300
A television set	US \$ 250
A pair of shoes	US \$ 55
A refrigerator	US \$ 450
Ug Sh. 3500	UD \$ 1
Ug sh. 30	K shs. 1

(a) John bought two radio sets, one pair of shoes and a refrigerator.  
Calculate his total expenditure in Uganda shillings. (4 marks)

(b) What is the cost of a television set in Kenya shillings? (2 marks)

25. Given that line  $AC$  is one of the diagonals of a square  $ABCD$ . Using a pair of compasses, a ruler and a pencil only, construct square  $ABCD$ . (4 marks)



Measure line  $AB$ .

(1 mark)

26. (a) When a number is subtracted from 3, the result is either equal or less than 7. What are the possible values of the number if the number is less than 4? (3 marks)

- (b) Subtract  $\frac{1}{2}$  of  $(4x + 8)$  from  $9x - 4$  (2 marks)

27. The table below shows the distribution of pupils in different classes in a school with a total enrolment of 755 pupils.

Class	P.1	P.2	P.3	P.4	P.5	P.6	P.7
No. of boys	20	60	21	88	100	60	.....
No. of girls	35	70	69	22	50	60	.....
Total	55	130	90	110	150	120	.....

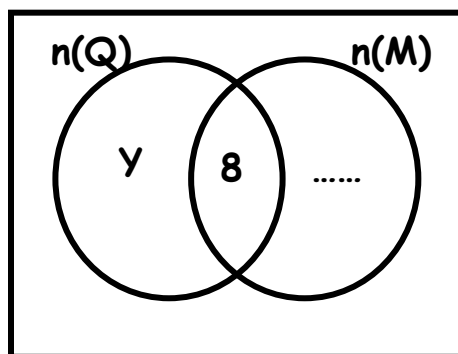
- (a) If there are 20 more boys than girls in P.7. How many girls are in the school?

(b) What is the ratio of boys to girls in P.1, P.2 and P.3 altogether?

28. A car consumes 2 litres of petrol every 3km it covers. Find how much money is required to fuel the car travelling at a speed of 60km/hr from 8:30a.m to 12:30p.m. If each litre costs sh. 3000. ( 5 marks)

29. Among three scores of tourists, Y visited Queen Elizabeth national park (Q) only,  $(40 + y)$  visited Lake Mburo National park (M) only, 8 visited both parks while two visited other parks.

(a) Using the information above, complete the Venn diagram below.



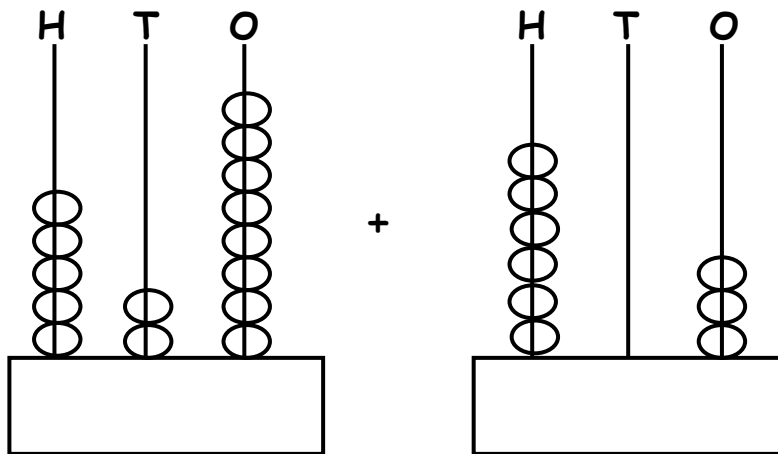
(2 marks)

(b) Find the value of Y.

( 2 marks)

- (c) What is the chance of selecting a tourist at random who visited Queen Elizabeth national Park? (1 mark)

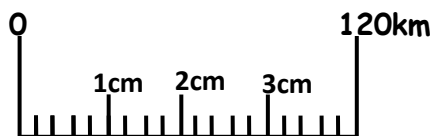
30. (a) Work out and show your answer on the abacus. (3 marks)



- (b) Express  $232_{\text{four}}$  in scientific notation. (2 marks)

31. Given that  $Y = 2x + 1$  is an equation of a line. Write down the possible co-ordinates through which the line passes if  $-2 > x > -4$ . (6 marks)

32. Use the map scale below to answer the following questions.



- (a) If the road is 12cm on the map, what is the actual length of the road on the ground? (2 marks)



- (b) If the distance from Kampala to Tororo is 240km. Find the map distance from Tororo to Kampala. **(2 marks)**

**END.**

## **SECTION A (20 Questions - 40 marks)**

1. Divide : 33

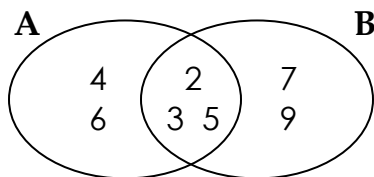
$$\begin{array}{r} \text{ } \\ \times 3 \\ \hline \text{ } \\ \hline \end{array}$$

2. Write in figures: Seven thousand, seven.

3. Simplify:  $2k + 4 + k + 2$

4. Find the next number in the sequence;  
6, 4, 7, 5, 8, \_\_\_\_

5. Find the number of elements in the complement of  $A \cap B$ .

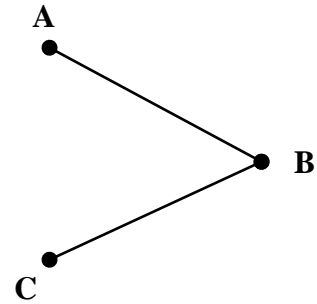


6. Show the number 2043 on the abacus below.

Th	H	T	O

7. Round off: 12.94 to the nearest tenth.

8. Using a pair of compasses, a ruler and a pencil only, bisect the angle ABC below.



9. If  $1\text{m} = 100\text{cm}$ , change  $0.2\text{m}$  to cm

10. In a class, there are 30 girls and 20 boys.  
Express the number of girls as a percentage of the entire class.

11. An examination started at 8:30am and lasted 1 hour 30 minutes. At what time did the examination end?

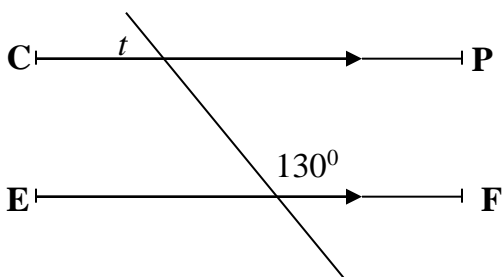
12. Work out :  $4 \times 3 = \underline{\hspace{2cm}}$  (modular 5)

13. Find the Greatest Common factor of 18 and 30.

14. Given that  $x = -3$  and  $y = 4$ . Find the value of  $x - y$

15. The area of a rectangle is  $84\text{cm}^2$ . Calculate the width of the length is 12cm.

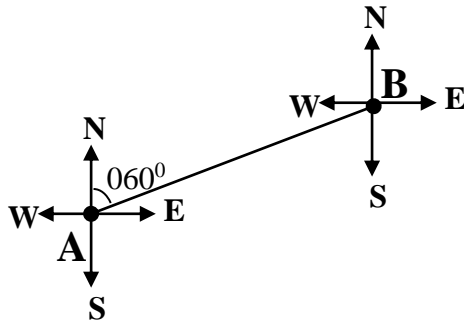
16. In the figure below, CD is parallel to EF, study it and find the size of the angle marked t.



17. Add:  $110_{\text{two}} + 20_{\text{two}}$

18. Increase shs. 80,000 by 20%

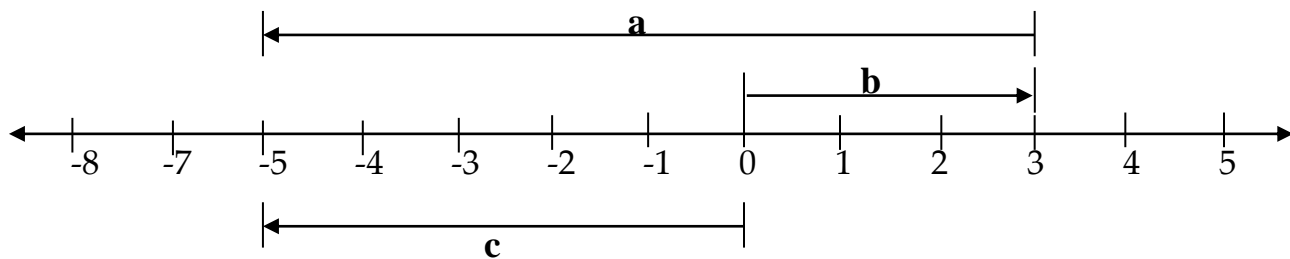
19. Use the sketch diagram below to find the ordinary bearing of town B from A.



20. The mean age of Kato, Kakuru, Kate and Konso is 13 years. Find their total age.

### SECTION B

21. Use the numberline below to answer the questions that follow.



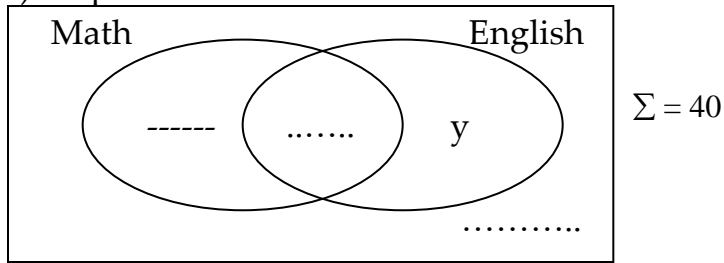
a) Write the integers represented by the arrows.

(i)  $c =$  \_\_\_\_\_ (ii)  $b =$  \_\_\_\_\_ (iii)  $a =$  \_\_\_\_\_

b) Write down the addition mathematical shown above.

22. In a class of 40 pupils, 12 pupils like only maths (M) 10 pupils like both maths and English while '5' like none of the subjects. If y like English only.

a) Represent the above information on the venn diagram below.



b) Find the value of y.

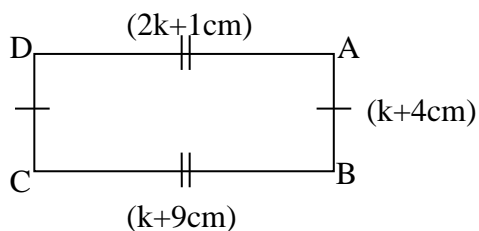
c) If the teacher is to select a class captain, what is the chance that one selected likes only one subject?

23. (a) Solve the inequality and find the solution set.

$$2(x + 4) \leq 18$$

(b) Solve:  $3(t - 2) - 2(t + 4) = 16$

24. Below is a rectangle ABCD.



(a) Find the value of K in cm.

(b) Find the measurement of line BC

(c) Work out the area of the above figure.

25. A primary seven pupil scored the following marks in beginning of term 2 exams.

74, 84, 94, 84

(a) Find the mode.

(b) Find the average mark

(c) Find the range of marks

(d) Find the median mark.

26. (a) Find the product of the value of 4 and the place value of 6 in the number 34, 5, 6, 2.

(b) A salesman made receipts for a drama show consecutively from 304 up to 514 respectively. Each receipt was worth 5,000/=. How much money did he collect altogether?

27. With the help of a sharp pencil, ruler and pair of compasses, construct a parallelogram PQRS where angle PQR =  $120^\circ$ , angle PQS =  $60^\circ$ , line PQ = 6.5cm and line PS = 4.7cm.

Measure;

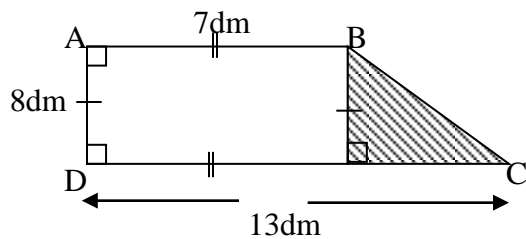
(i) line QS .....

(ii) angle PSQ .....

28. (a) Work out:  $\frac{0.36 - 0.24}{0.012}$

(b) After spending  $\frac{1}{3}$  of my money, I was left with Shs. 200,000. How much money did I have at first?

29. The diagram ABCD below is a trapezium. Use it to answer questions that follow.



(a) Find the length of BC

(b) Work out its area.



30. Two bells ring at intervals of 30 minutes and 40 minutes respectively.

a) After how many hours will the 2 bells ring together at the same time?

b) If they first ring at 9:30a.m. when will the two bells ring together again?

31. In a restaurant,  $\frac{1}{3}$  of the customers ordered for local food,  $\frac{1}{4}$  of the remainder ordered for snacks and eighty customers ordered for only drinks.

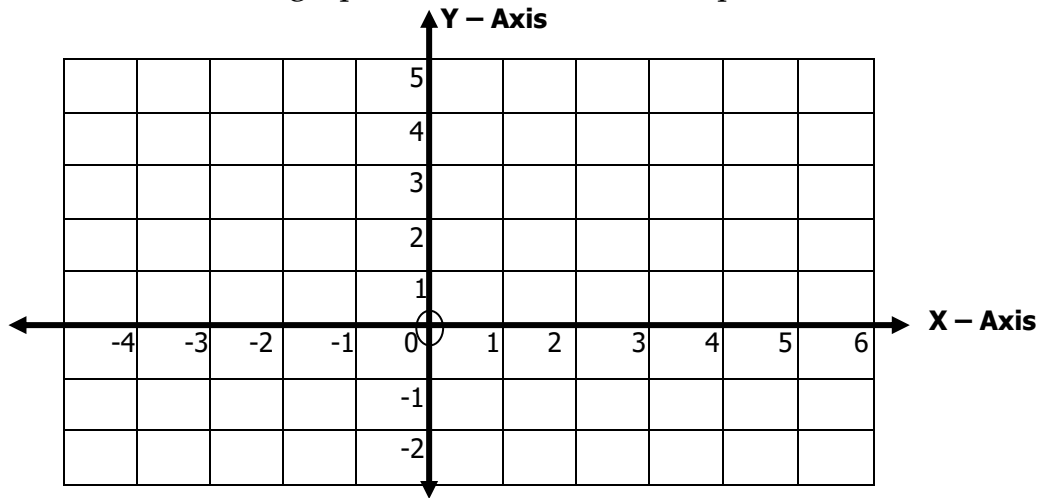
a) Find the fraction of customers that ordered for;

(i) Snacks

(ii) drinks

b) How many customers in total visited that restaurant?

32. Use the co-ordinate graph below to answer the questions that follow.



a) Plot the following coordinates.

A ( -3, 2), B ( -3, -1), C(2, -1), D(2, 2)

b) Join the points; A to B, B to C, C to D and D to A.

c) Calculate the area of the figure in square units.