

MATHEMATICS

Time Allowed: 2 hours 30 minutes

Index No.	Random No.						Personal No.		

Candidate's Name:

Candidate's Signature:

School Random No.

District ID:

Read the following instructions carefully:

1. Do not write your **school** or **district name** anywhere on this paper.
2. This paper has two sections: **A** and **B**. Section **A** has **20** questions and Section **B** has **12** questions. The paper has **16 printed pages** altogether
3. Answer **all** questions. **All** the working for both sections **A** and **B** must be shown in the spaces provided.
4. **All** working must be done using a **blue** or **black** ball point pen or ink. Any work done in pencil other than graphs and diagrams will **not** be marked.
5. **No calculators** are allowed in the examination room.
6. Unnecessary **changes** in your work and handwriting that cannot easily be read may lead to loss of marks.
7. Do not fill anything in the table indicated: "**For Examiners' Use only**" and boxes inside the question paper.

FOR EXAMINERS' USE ONLY		
Qn.No.	MARKS	EXR'S NO.
1 - 5		
6 - 10		
11 - 15		
16 - 20		
21 - 22		
23 - 24		
25 - 26		
27 - 28		
29 - 30		
31 - 32		
TOTAL		

SECTION A: 40 MARKS

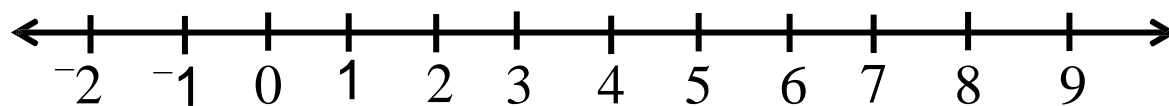
Answer **all** questions in this Section

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

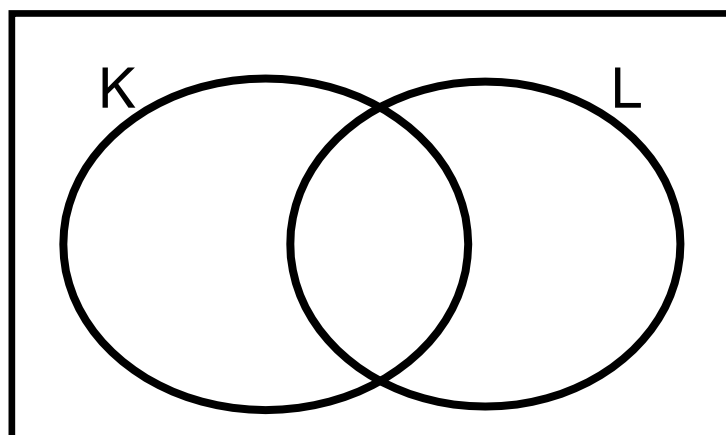
1. Work out: $22 \div 2 =$

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

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



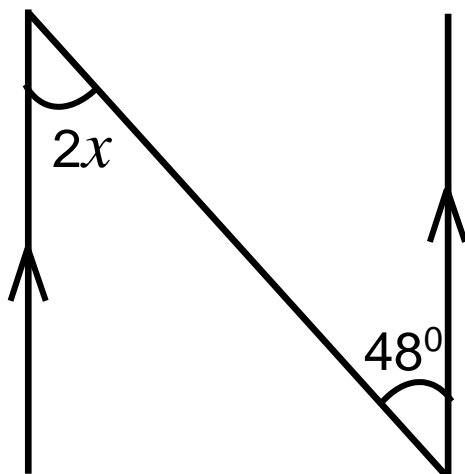
4. If $K = \{ c, o, v, i, d \}$ and $L = \{ v, i, r, u, s \}$. Represent the information above on the Venn diagram below.



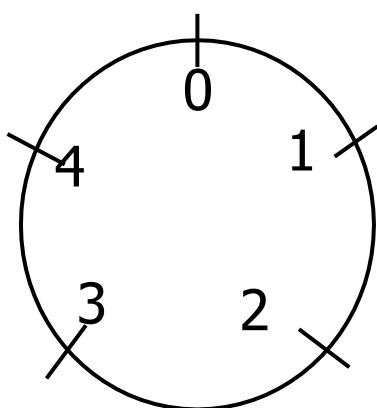
5. Tracy borrowed sh:400,000 from Post Bank Uganda which gives an interest rate of $2\frac{1}{2}\%$ per month for a period of 9 months. How much money will she pay back after the end of the period?



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



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

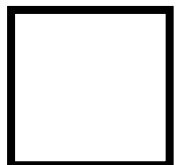


8. Find the next two number in the series below,

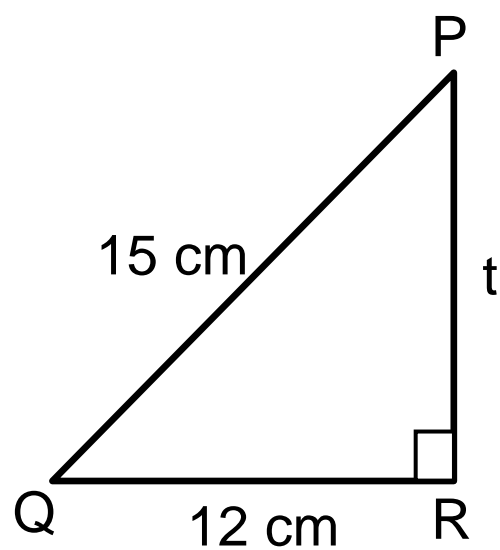
216, 125, 64, 27,,

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

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



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



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



16. Six boys complete a piece of work in 32 hours. How many more boys are needed to complete the same piece of work in 12 hours, working at the same rate?
17. Calculate: $1101_{\text{two}} \times 11_{\text{two}}$
18. Using a pencil, ruler and a pair of compasses only, construct an angle of 105° in the space below.

19. Given that $p = 2$, $q = 3$ and $r = 4$. Find the value of $p^3 - qr$

20. Kemigisha has to fence around her rectangular plot of land 225m by 165m. How many poles will she need if the fencing poles will be 3m apart?



SECTION B: 60 MARKS

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

Marks for each question are indicated in brackets

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

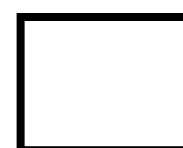
Marks	60	80	50	70
Number of pupils	1	3	k	2

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

(b) How many pupils passed above the average score? (03 Marks)

22. (a) Using a ruler, pencil and a pair of compasses only, construct a Triangle ABC in which $AB = 6\text{cm}$, Angle $ABC = 30^\circ$ and angle BAC is 90° in the space below. (04 Marks)

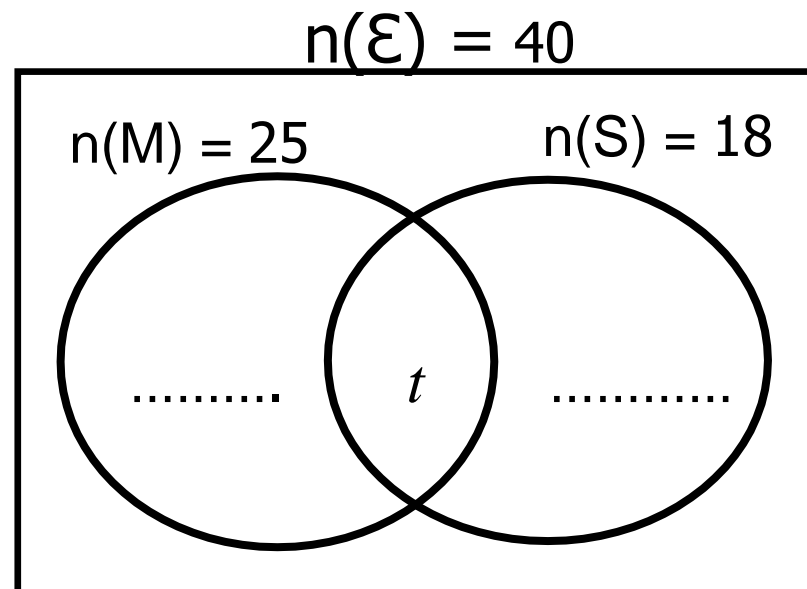
(b) Find the area of the triangle above. (02 Marks)



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

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

(02 Marks)



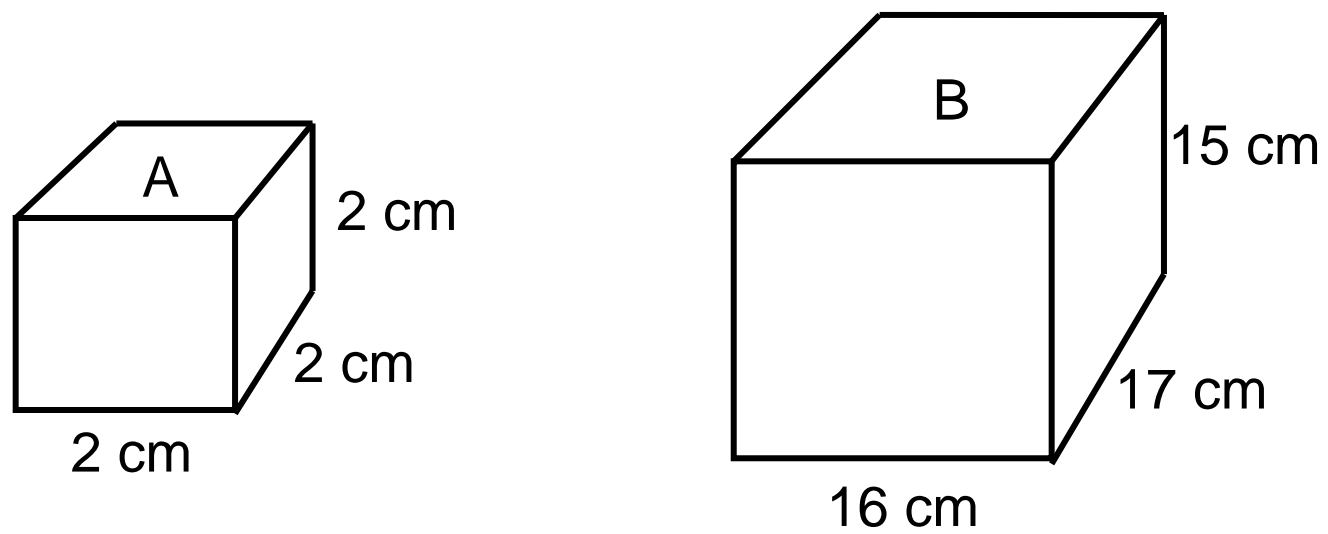
(b) Find $n(t)$.

(02 Marks)

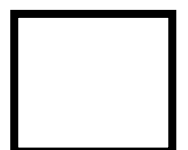
(c) Work out $n(s) /$

(01 Mark)

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



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



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

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

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

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

- (a) How long did the bus take to move from Kampala to Lira? (01 Mark)
- (b) For how long did the bus stay in Mbale? (01 Mark)

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

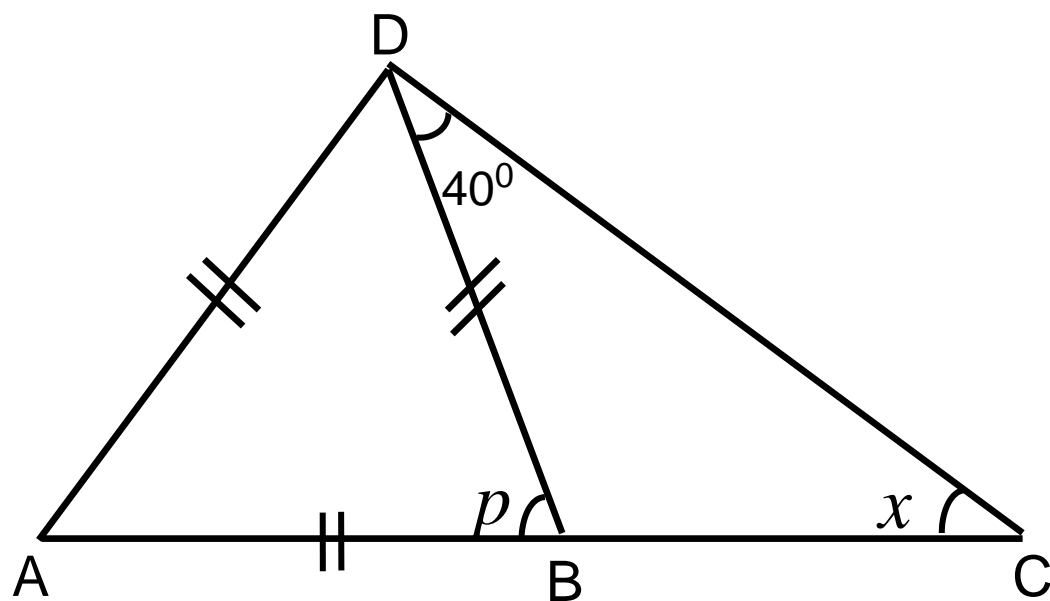
(01 Mark)

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

(02 Marks)



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



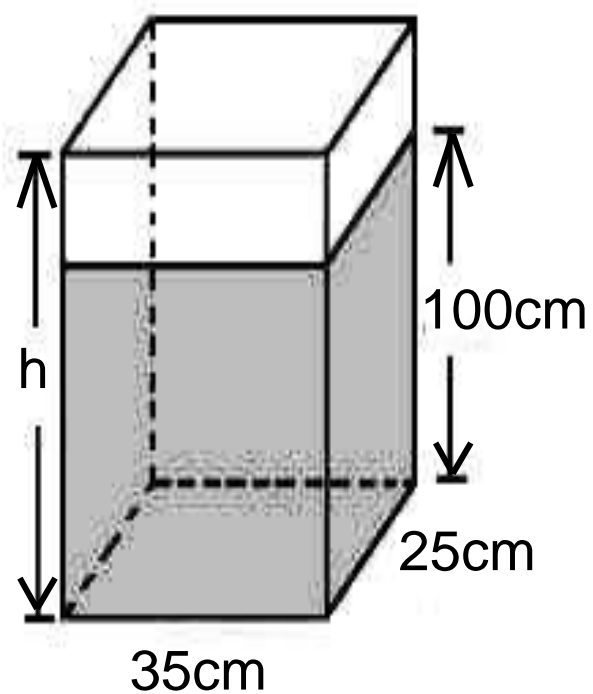
(a) Find the size of angle **P**.

(02 Marks)

(b) Find the value of angle **X**.

(02 Marks)

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



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

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



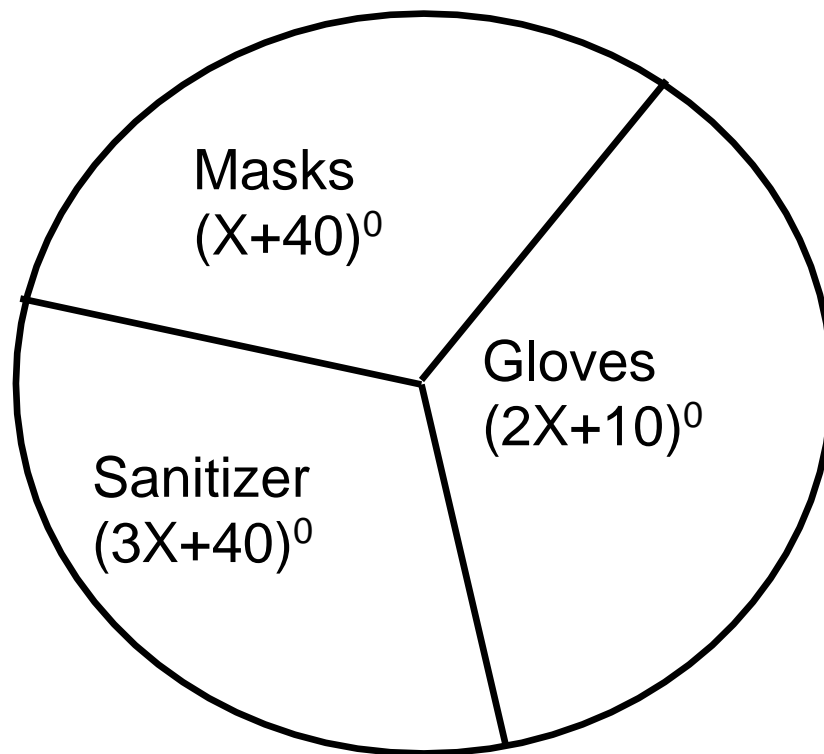
29. (a) A mother is twice as old as her son. In 5 years time their total age will be 70 years. How old is each now? (03 Marks)

(b) Baagala had y tomatoes while Kalibbala had five times as many tomatoes as Baagala. They decided to put them together and divide into three equal heaps. If each heap had ten tomatoes, how many such tomatoes did each have to begin with? (03 Marks)

30. Suzan has a larger container of 300 litres. She sells passion fruit Juice using a small container of 600ml at shs.500 each. How much will she get if she sells all the juice in the large container? (04 Marks)



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



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

32. Town Q is 50km West of town P and town R is 40km from town P on a bearing of 150° .
- (i) Using the scale of $1\text{cm} = 10\text{km}$, draw a rough sketch showing the three towns. (01 Mark)

- (ii) Draw an accurate diagram showing the three places. (03 Marks)



- (iii) What is the shortest distance from Q to R? (01 Mark)

