

**EDUCATION SOURCE 2024**  
**LAST SET TO PLE MOCK**  
**MATHEMATICS**

*Time Allowed: 2 hours 30 minutes*

	Random No.						Personal No.		
<b>Index No:</b>									

**Candidate's name:** .....

**Candidate's signature:** .....

**District :** .....

**Read the following instructions carefully**

1. This paper has two Sections: A and B.
2. Section A has 20 answer questions (40 marks)
3. Section B has 12 questions (60 marks)
4. Answer ALL questions. Answers to both sections must be written in the spaces provided.
5. All answers must be written using blue ink. Diagrams should be drawn in pencil.
6. Unnecessary alteration of work may lead to loss of marks.
7. Any handwriting that cannot be easily read may lead to loss of marks.

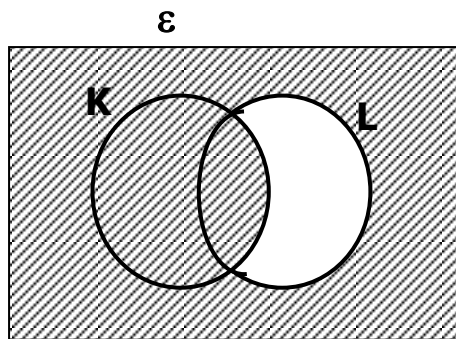
For Examiner's use only	
<b>A</b>	
<b>B</b>	
<b>TOTAL</b>	

**Do not fill anything in the box indicated for examiner's use only.**

**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?

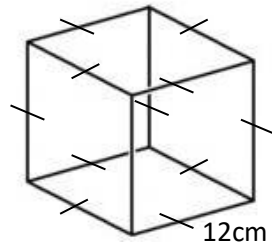
7. How many similar strides of 20cm can a boy make to cover a distance of four metres?
8. Using a pair of compasses, a ruler and a sharp pencil only, construct an angle of  $105^\circ$  in the space provided below.
9. Use set notations to describe the shaded region on the venn diagram below.



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.

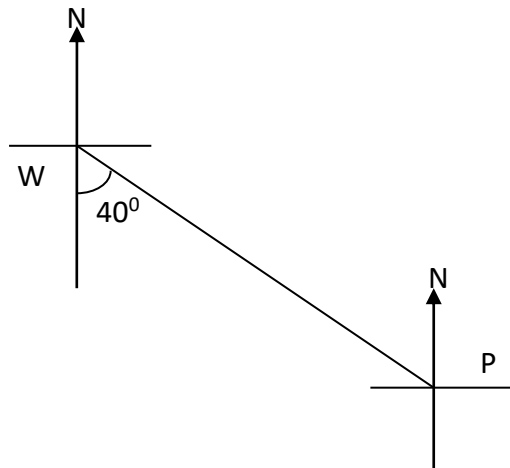
17. When a dice is tossed once, what is the probability of picking a factor of six at random?

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.

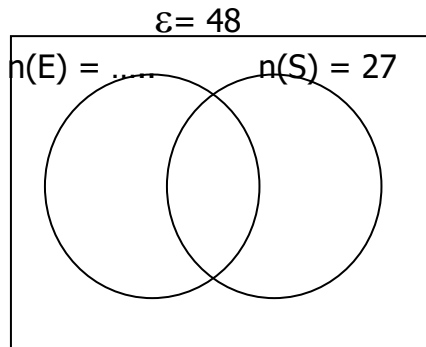


What is the bearing of town **W** from town **P**?

**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)**

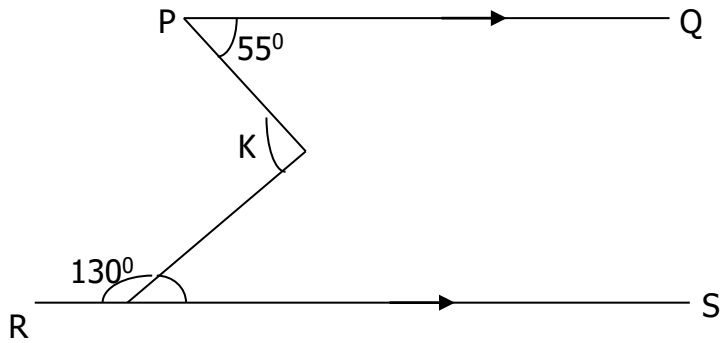
22. (a) Express 142 in powers of 3.

**(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)**

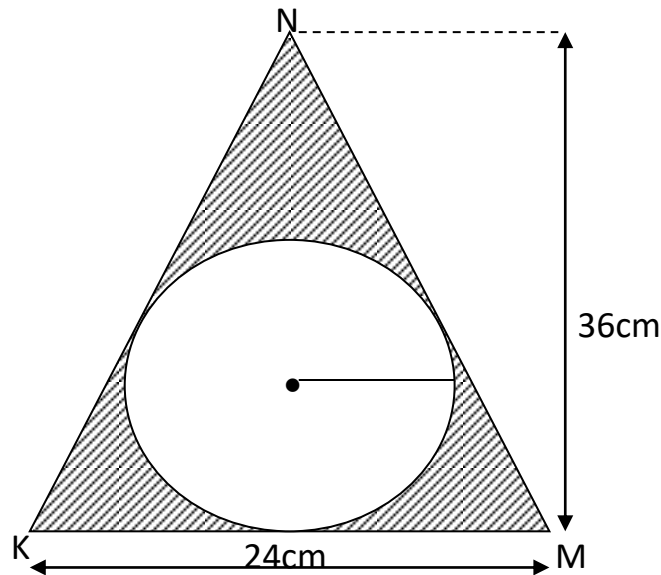
25. (a) Using a ruler, a pair of compasses and a pencil only, construct an isosceles trapezium in which  $PQ = 8\text{cm}$ ,  $PS = QR = 4.5\text{cm}$ ,  $\angle SPQ = \angle RQP = 60^\circ$ .  
Join point R to point S. **(5 marks)**

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



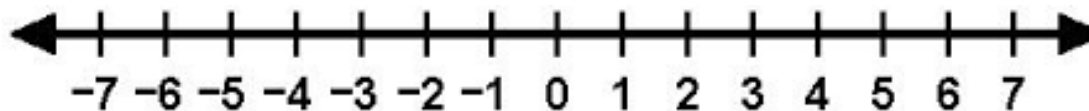
- (a) Find the area of the circle.

(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)**

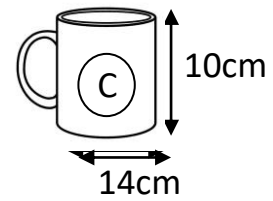
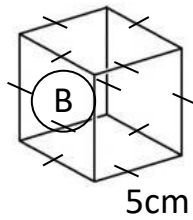
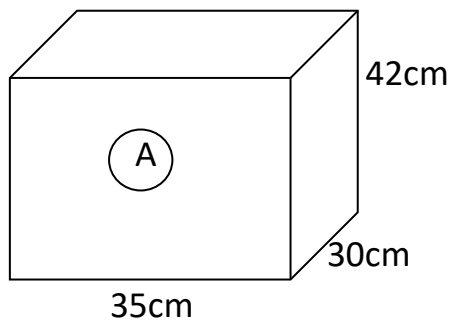
30. A bus travelled from Kisoro to Kabale at a speed of 90km/hr for 2hrs 30 minutes and later returned to Kisoro at a steady speed of 100km/hr.

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

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

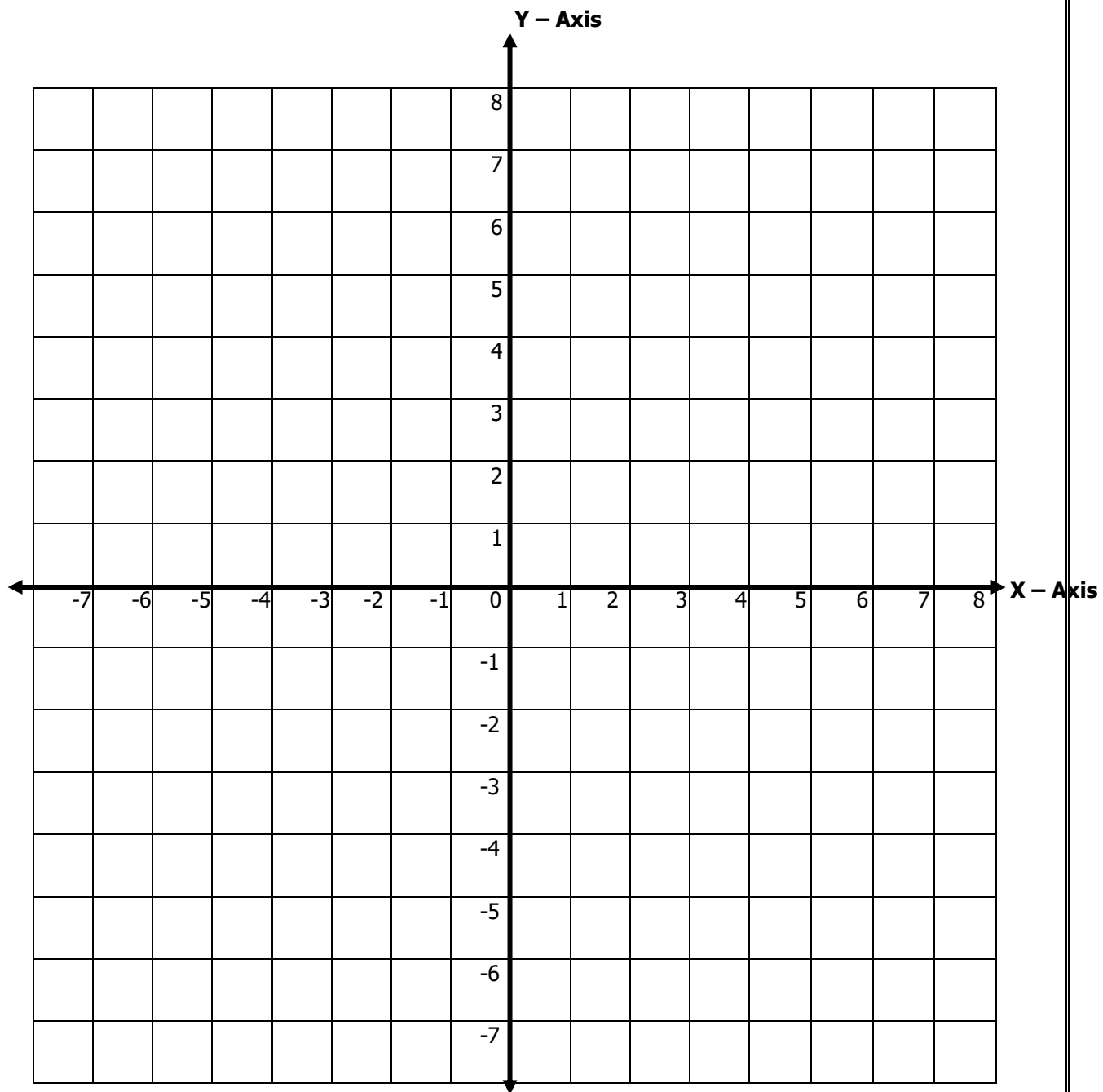
(c) Calculate the average speed for the whole journey. **(2 marks)**

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.**