SUREKEY EXAMINATIONS BOARD
PRE-PLE SUPER SERIES (GENEVA)
2024
MATHEMATICS

Time Allowed: 2 hours 30 minutes

Index No.	Random No.						Personal No.		

Candidate's Name: ....

Candidate's Signature: ....

School Name: ....

District Name: ....

Read the following instructions carefully:

1. Do not forget to write your **school** and **district name** 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.   Workout: $\frac{2}{3} \times \frac{1}{8}$.
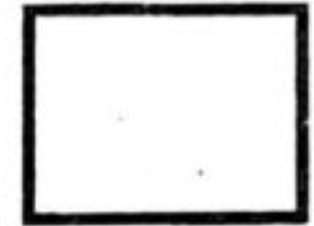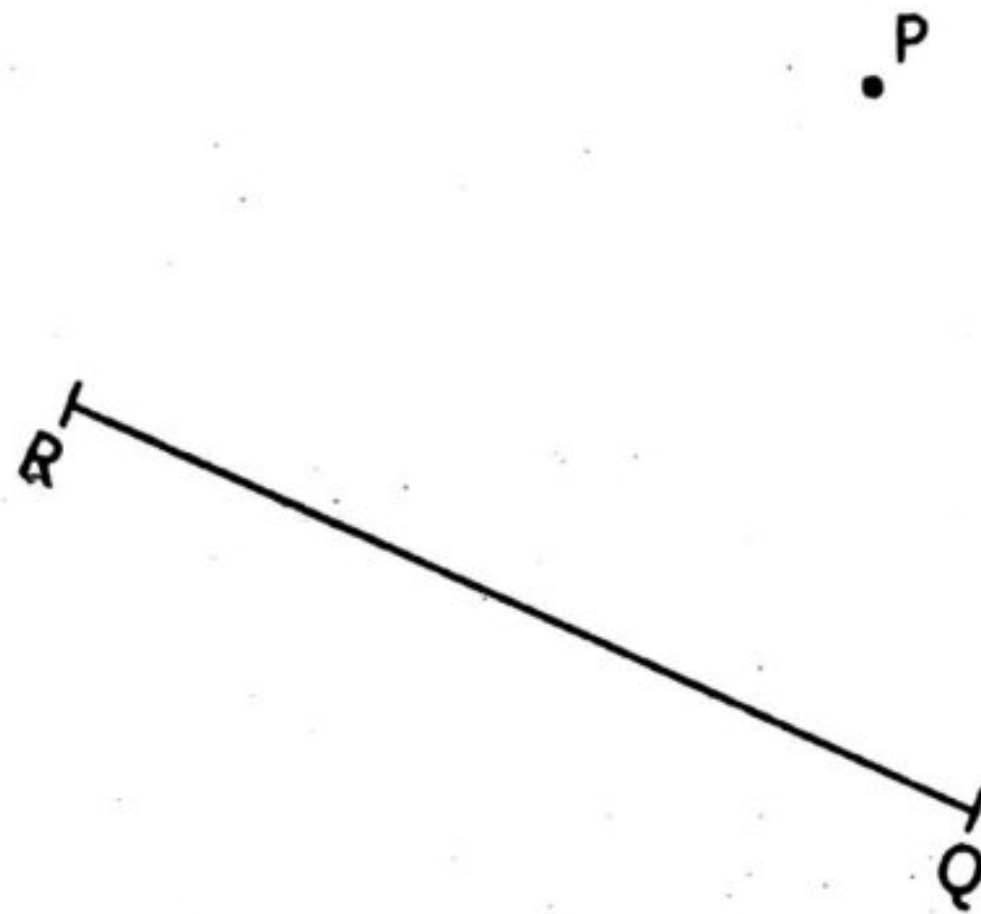
2.   Write 512.604 in words.

   ....

   ....

3.   Given that W = {2 x 2 x 3} and X = {2^3 x 3^2}. Find the Least Common Multiple (LCM) of W and X.

4.   Round off 47657 to the nearest hundreds.

5. In a basket, there are 3 bad eggs and the rest are good. The probability that a bad egg is picked at random from the basket is 15%. How many good eggs are in the basket?

6. Using a ruler, a pencil and a pair of compasses only, drop a perpendicular from point P to meet line segment RQ at point O.
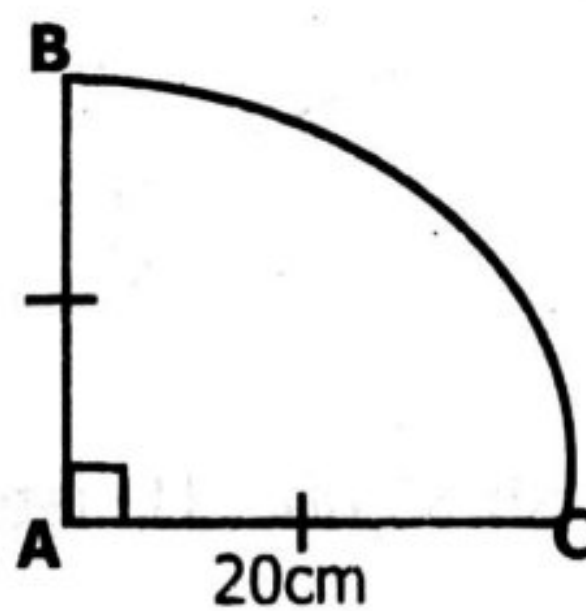
P

R

Q

7. A trader bought an article at Sh.30,000. He later sold it at a gain of $16\frac{2}{3}\%$. Find the trader's gain.

Turn Over

8.   Subtract $3g - 8$ from $15 - 6g$.

9.   Find the binary base numeral represented by 13.

10.   The figure below is a quadrant ABC of radius 20cm.

Find the length of the arc **BC**.   (Use π as 3.14)
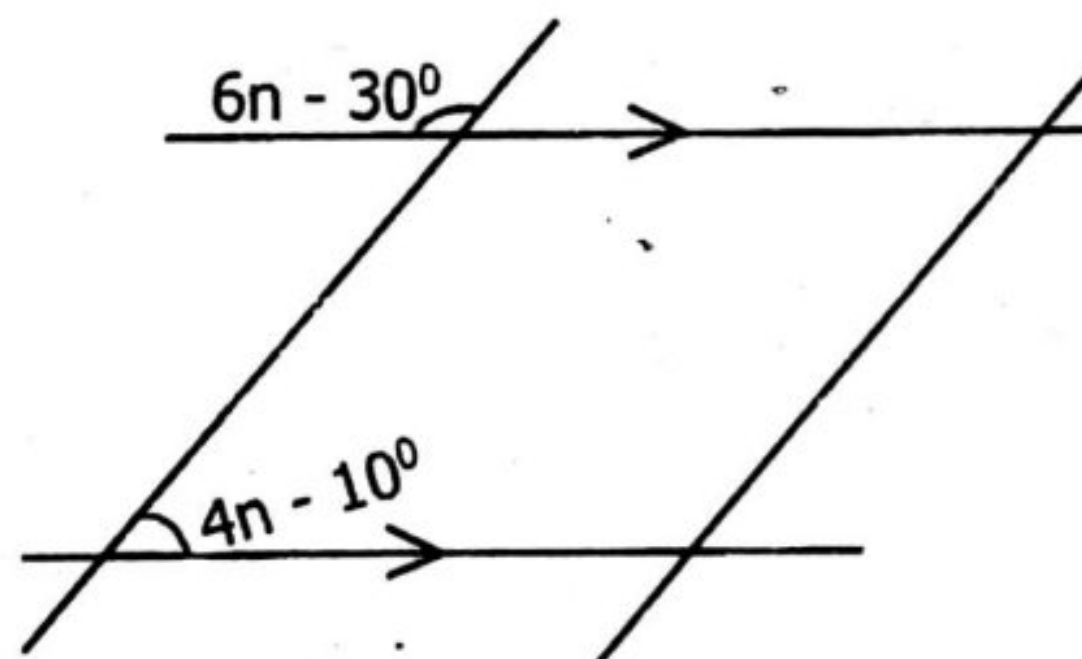
11. Find the sum of the next two numbers in the sequence below.

$$-6, \ -8, \ -10, \ -12, \ \ldots\ldots\ldots, \ \ldots\ldots\ldots$$

12. A son is a half the father's age. The product of their ages is 200 years. How old is the father?
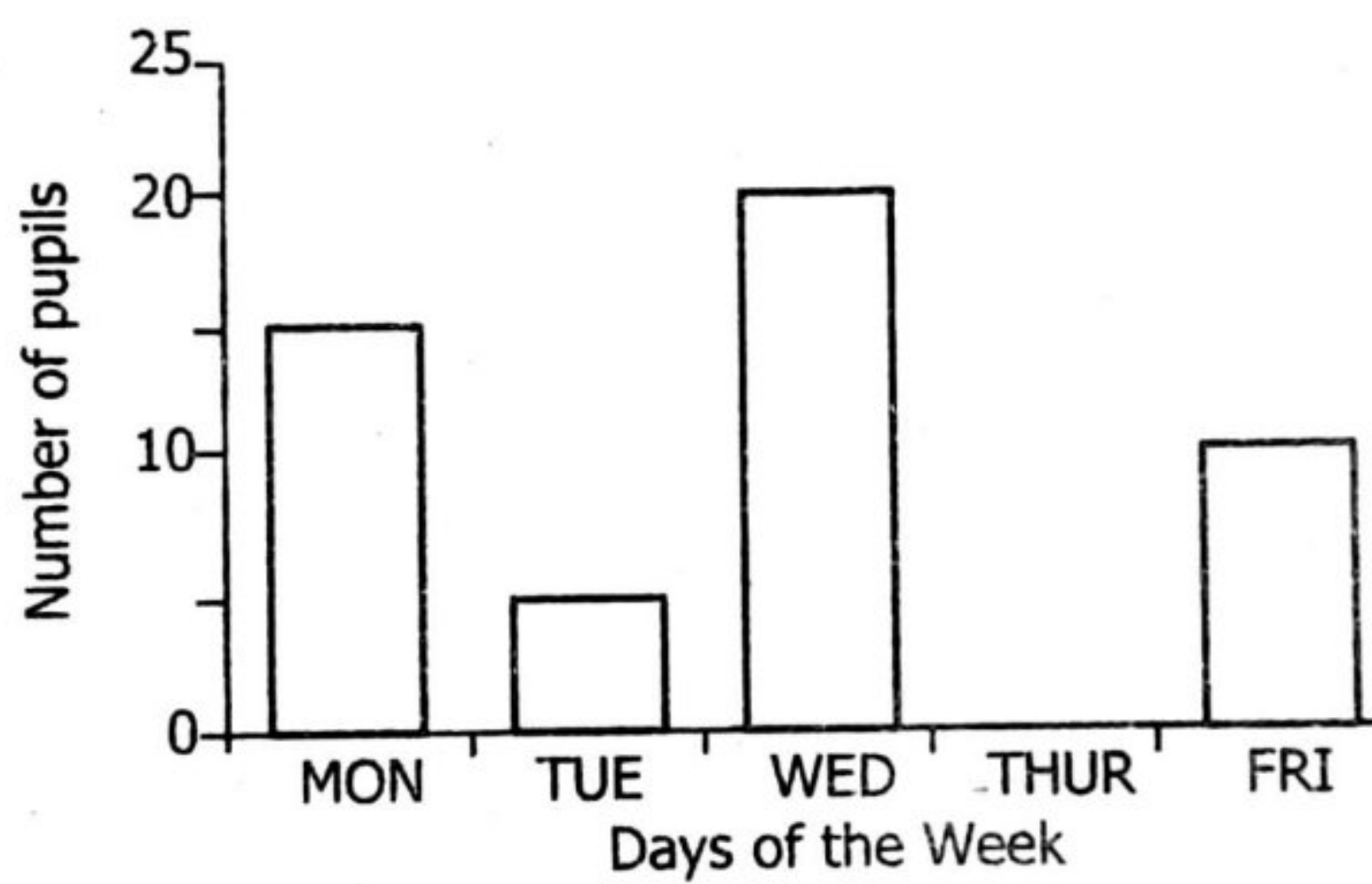
13. Find the value of n in the figure below.

14. A, B and C shared Sh.98,000 in the ratio of 2:m:7 respectively. If B got Sh.35,000. Find the value of m.

Turn Over

15. A thanksgiving prayer at Kibilibiri Primary School started at 10:45pm and ended at 1:10a.m. For how long did the prayer last?

16. The graph below shows the number of pupils who were absent in a class of 50 pupils during a period of one week in Top Care P/S.
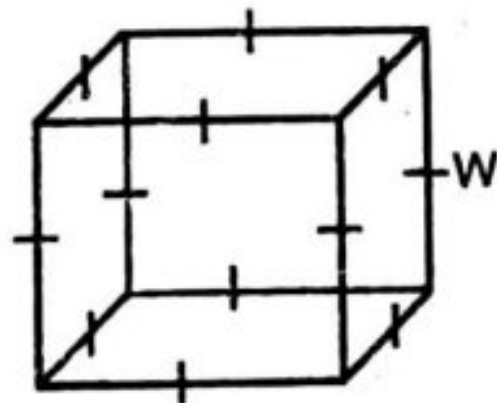

Workout the average attendance for the week.
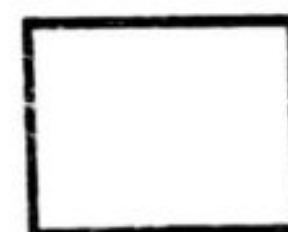
17. Solve: 2m − 3 = 2 (finite 7)

18. What number has been expanded to get $(6 \times 10^3) + (5 \times 10^{-2})$?

19. 5 men can dig a garden in 8 days. How many days do 4 men take to do the same piece of work?

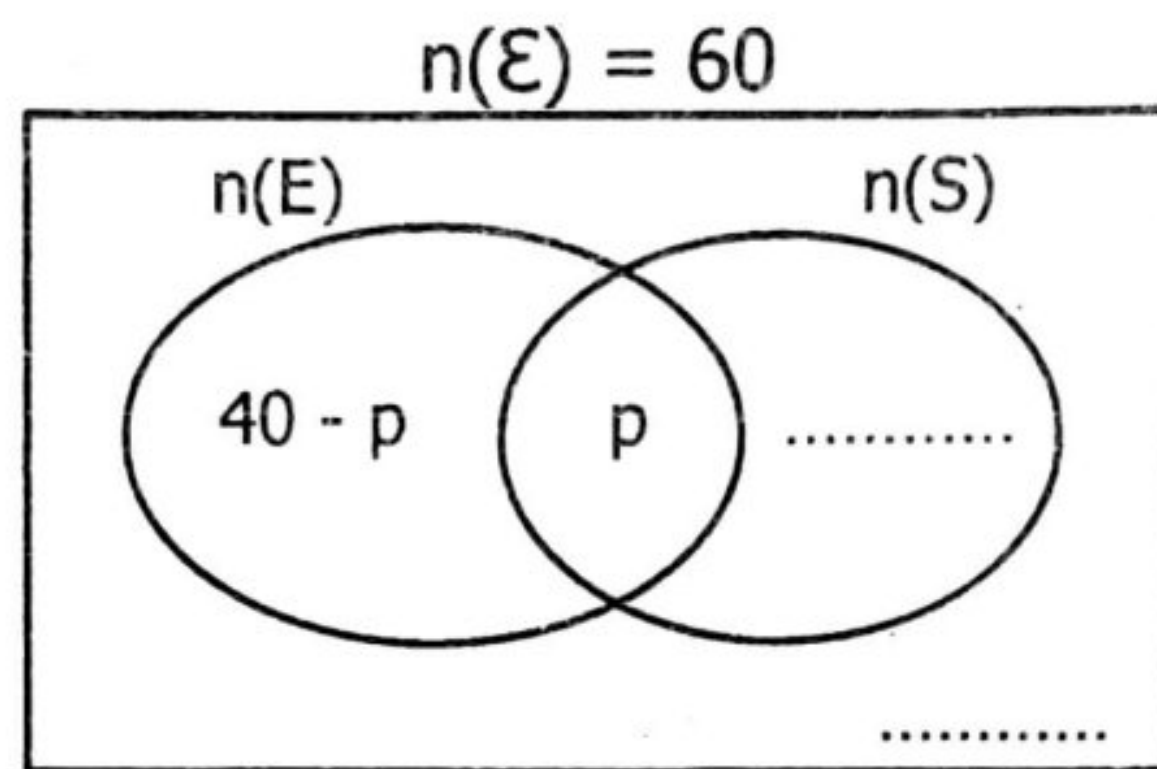20. Below is a cube whose total surface area is 600m².

Find the value of w.

Turn Over

21. In a class of 60 pupils, 40 pupils like English (E), $\frac{1}{4}$ of the pupils who like English like Science (S) only. p pupils like both English and Science while $(2p - 10)$ pupils do not like any of the two subjects.

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

(02 Marks)

$$n(\mathcal{E}) = 60$$

n(E)   n(S)

40 - p   p   ....

....

(b) Find the number of pupils who like none of the subjects.

(03 Marks)

22. (a) Simplify: $\dfrac{0.48 \times 0.45}{0.09 \times 0.8}$

(03 Marks)

(b)   Change 0.636363......into a common fraction in its lowest form.
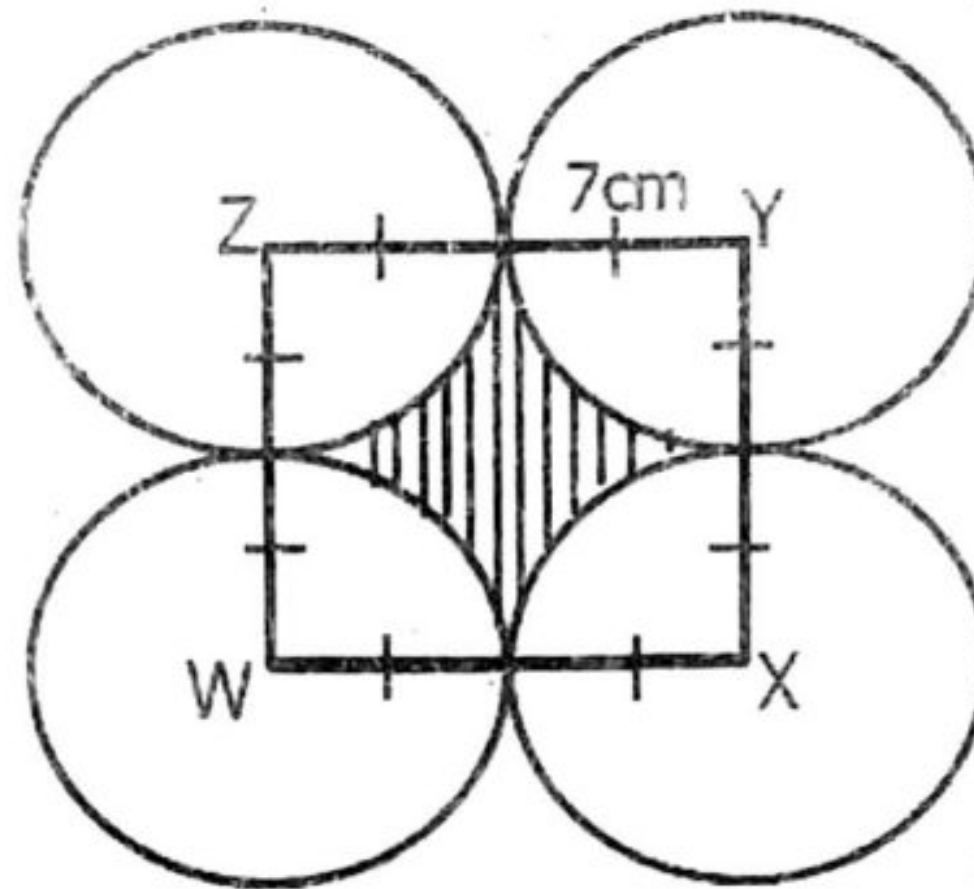
(03 Marks)

23. The table below shows the ages of children who were immunized against COVID 19 at Mubende Referral Hospital on a certain day.

Age	5	8	13	10
Number of children	3	4	1	r

(a)   Find the value of r if their average age was 8.   (03 Marks)

(b)   What was the modal age of the immunized children?   (01 Mark)

Turn Over

24. The diagram below shows four circles in contact, each of radius 7cm. A quarter of each circle is occupied by a square WXYZ. Study it carefully and answer the questions that follow.

(a) Workout the area of the square. (02 Marks)

(b) Find the area of the shaded region. (Use π as $\frac{22}{7}$) (03 Marks)
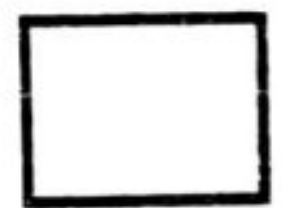
25. Goretti went to the Supermarket and bought the items below which were written on her shopping list.

- 750g of rice each at Sh.5,200 per kilogram
- $1\frac{1}{2}$ litre of cooking oil at Sh.3,500 per litre.
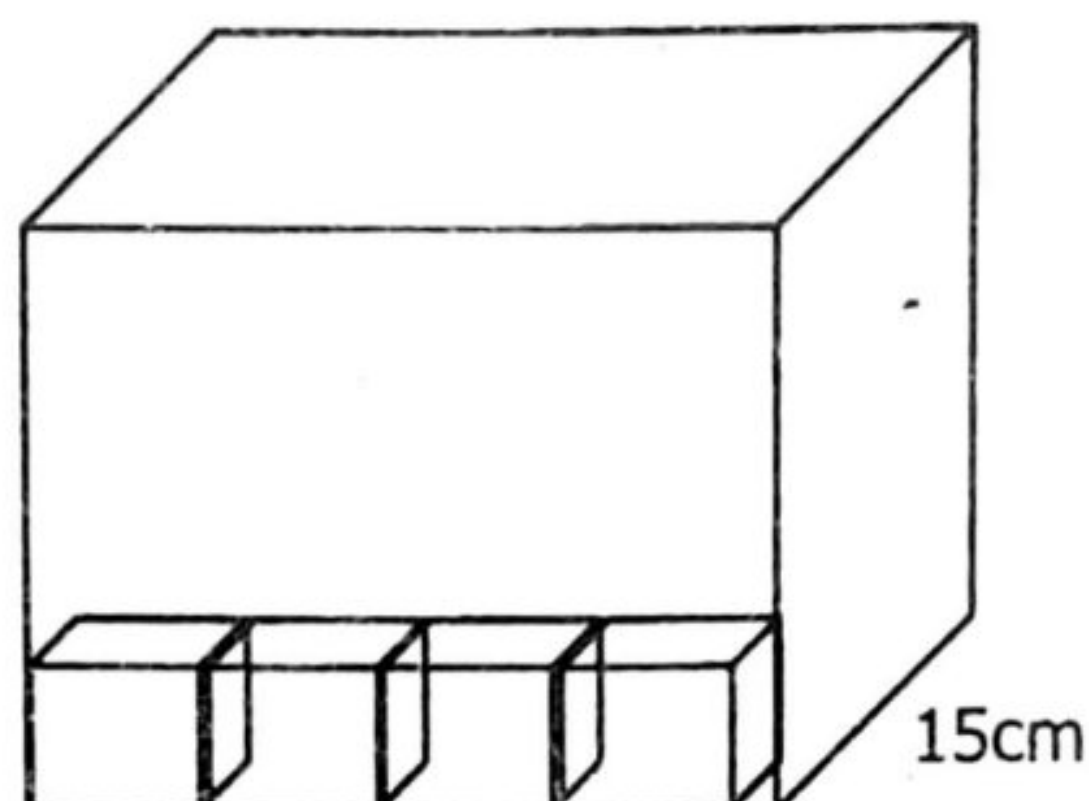- 2kg of flour at Sh.4,400.

(a) How much did she pay for all the items on the list?   (03 Marks)

(b) Find the cost of 3 litres of cooking oil at the same rate.
(01 Mark)

26. Kakama bought 20 litres of milk at Sh.1,500 each. On his way home, some milk poured and he sold the remaining milk at Sh.1,200 per half litre and made a profit of 20%. How much milk was poured?
(04 Marks)

Turn Over

27. Joyce packed Royco cubes each of volume 64cm³ in a cuboidal box. 10 layers were formed in the box and 4 cubes were packed along the length as shown below.

15cm

(a) How many Royco cubes did Joyce pack in the box altogether?

(03 Marks)

(b) Calculate the space left in the box after packing the Royco cubes in the box.

(03 Marks)

28. Nambasa borrowed a certain sum of money from ABSA bank at an interest rate of $12\frac{1}{2}\%$ per annum. At the end of 3 years, he had paid back a total of Sh.330,000.

(a)   How much did she borrow from the bank?   (0 Marks)

(b)   How much interest did she pay in the 3 years?   (01 Mark)

```
┌────┐
│    │
└────┘
```

Turn Over

29. At China Town, 8 pens cost two fifth the cost of a book and a set costs Sh.5,000 less than the cost of a book. If the total cost of all the 3 items is Sh.19,000. How much will Tom pay for a dozen of pens? (05 Marks)

30. A driver left Mukono moving at a speed of 60km/h for $2\frac{1}{2}$ hours to Jinja. He took breakfast for 30 minutes and then returned to Mukono directly through the same route at a steady speed of 50km/h.
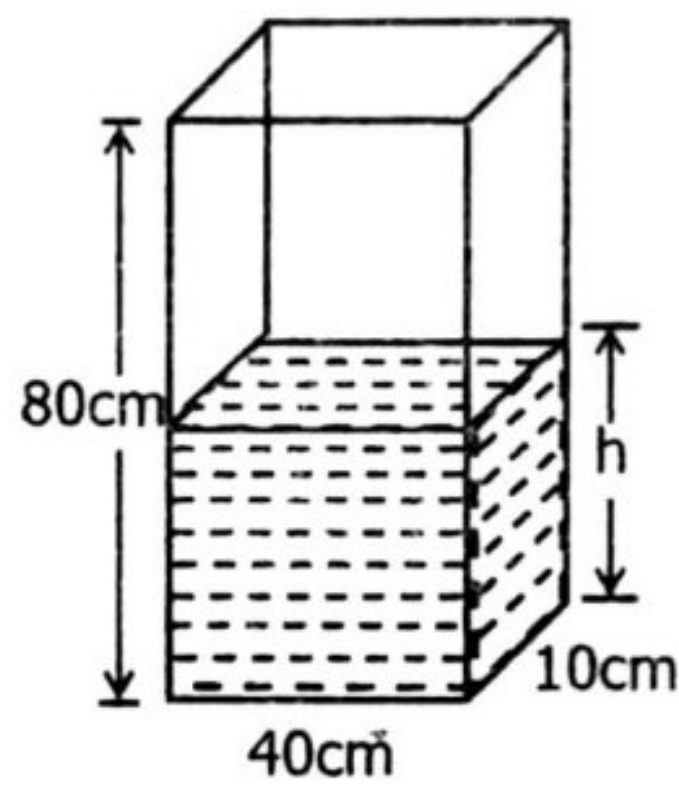
(a) How far is Jinja from Mukono? (02 Marks)

(b)   Calculate the driver's average speed for the whole journey.

(03 Marks)

31.   The tank below is $\frac{1}{4}$ empty of water. Study it carefully and answer the questions that follow.

(a)   Find the value of h.   (02 Marks)

(b)   How much water in litres, is required to make the tank completely full?   (03 Marks)

Turn Over

32. Ochia walked 60km from town A at a bearing of 150^0. Before reaching his destination, he changed his direction and walked 85km at a bearing of 225^0 to town B.

(a) Draw a sketch diagram of Ochia's movement. (01 Mark)

(b) Using a scale of 1cm to represent 10km, draw an accurate diagram showing Ochia's movement. (04 Marks)

(c) If he returned directly from town B back to town A, find the shortest distance between the two towns. (01 Mark)

END