

### SECTION A: 40 MARKS

Attempt **all** questions in this section.

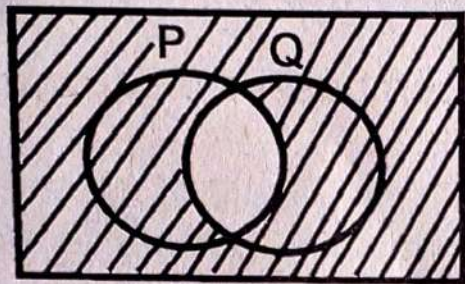
Questions 1 to 20 carry **two** marks each.

1. Complete the statement below;

$$4 + 4 + 4 = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}}$$

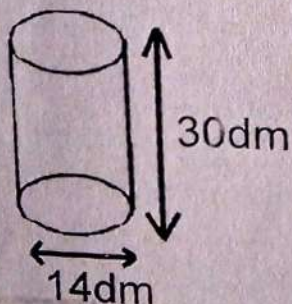
2. **Simplify:**  $8q - 3y - 5q + 7y$

3. Describe the **shaded** region on the Venn diagram below.



4. Find the number whose standard form is  $5.702 \times 10^5$ .

5. Find the volume of the cylinder below. (use  $\pi = \frac{22}{7}$ )





6. **Divide**; 3612 by 6.

7. Tap **Q** takes **3** minutes to fill the tank; tap **P** takes **4** minutes to draw the same tank. After how long will both taps take to fill the tank if open together at the same time?

8. Using a ruler, a pencil and a pair of compasses only, construct an angle of  **$105^\circ$** .

9. Solve the equation:  $3p + 4 = 16$ .

10. Express 5 as a recurring decimal.



11. Find the mean of  $16$ ,  $x$ ,  $2x + 3$  and  $x + 1$ .

12. At a forex bureau, **one** USA dollar costs **Ug. sh. 3,650**. A tourist has **Ug. sh. 1,825,000**. Find how many dollars she will get.

13. A bus arrived at 2:40pm; If the journey took  $2\frac{1}{2}$  hours, at what time did it depart?

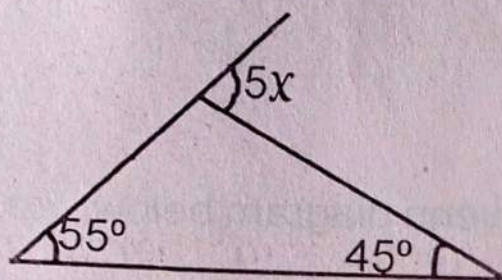
14. Change  $1101_{\text{two}}$  to base ten.

15. Calculate the square root of 1.44.



16. Set **M** has **64** subsets. Find  $n(M)$ .

17. Find the value of  $x$  in the diagram.



18. Simplify;  $x^5 \times x^3 \div x^4$

19. How **many** jumps of **4cm** can a frog make to cover a distance of **2 metres**?

20. Use power **notation** to expand 396.7.



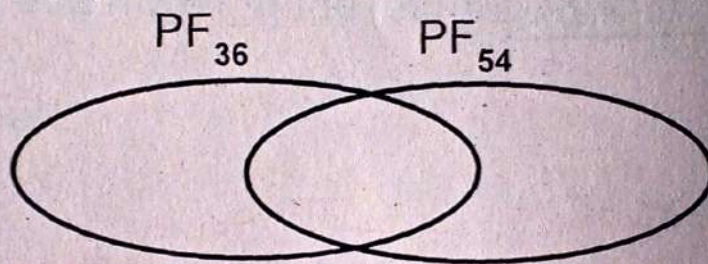
## SECTION B: 60 MARKS

Attempt **all** questions in this section.

Marks for **each part** of the question are **indicated** in the brackets.

- 21.(a) Prime factorise 36 and 54 and represent the prime factors in a set notation. (02 marks)

- (b) Represent the prime factors on the venn diagram below. (03 marks)



22. A mother went shopping and bought the following items;

$1\frac{1}{2}$  kg of meat at sh. 14,000 per kilogramme.

500ml of milk at sh. 2,000 every litre.

4 bars of soap at sh; 32,000

12 tomatoes at sh; 1,000 for every 3 tomatoes.

If she paid sh; 52,200; work out the percentage discount she got.

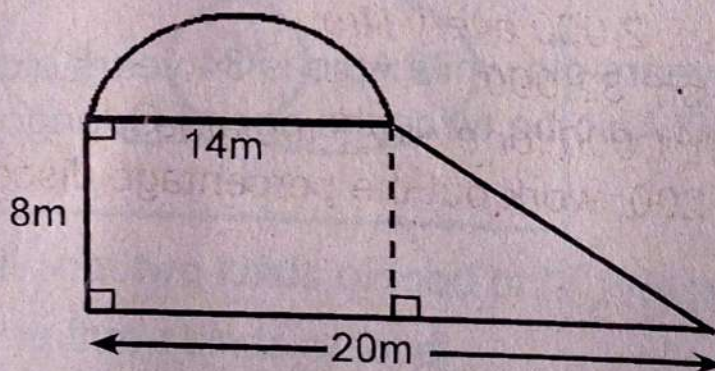
(05 marks)



23. (a) With the help of a ruler, a pencil and a pair of compasses only, construct a parallelogram ABCD such that angle ABC is  $120^\circ$ , line AB is 8cm, and line AC is 5cm. (04 marks)

(b) Measure diagonal AC \_\_\_\_\_ cm. (01 mark)

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

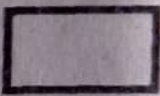


- (a) Find the area of the figure above. (03 marks)



(b) Work out the distance round the figure above.

(03 marks)



(03 marks)

25. (a) **Solve** the inequality:  $3(1 - x) < 12$

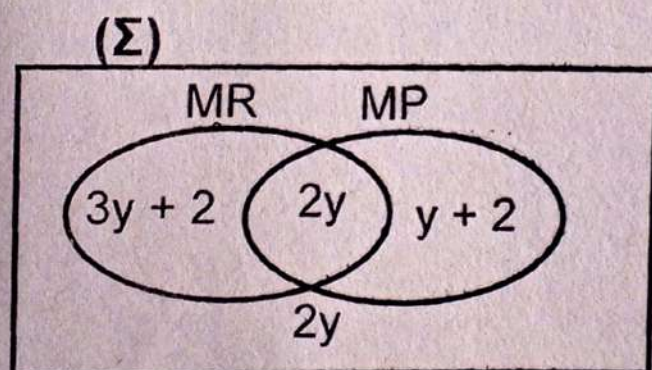
(b) Odongo is 16 years old while Apio is 34 years old. After how many years, will Apio be twice the age of Odongo?

(02 marks)



26. Suubi deposited money in the bank which offers a simple interest of 10% per year. After a period of 2 years, his account had an amount of sh. 864,000. Find the amount Suubi deposited in the bank. (04 marks)

27. The Venn diagram below shows pupils who eat **two** kinds of food, Matoke and Rice (MR), Matoke and Posho (MP), three kinds of food and Matoke only. **Study and use it to answer the questions that follow.**



- (a) If 32 pupils eat two kinds of food only, find the number of pupils who ate the three kinds of food. (03 marks)

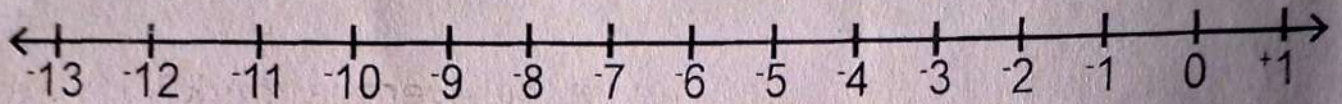


(b) Work out the number of pupils in the class.

(02 marks)

28. (a) Use the number line to work out  $3x - 4$ .

(03 marks)



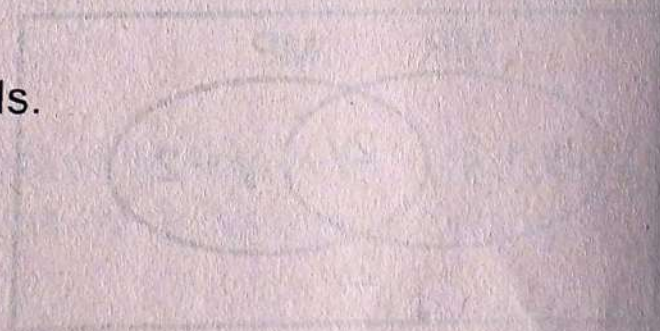
(b) If today is Friday, which day of the week was it 25 days ago?

(02 marks)



(02 marks)

29. (a) Write **69,732** in words.



(b) Calculate the quotient of the value of **9** and of the value of **3** in the above number.

(03 marks)

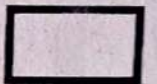


30. The frequency table below shows marks scored and the number of pupils who wrote the examination. **Study and use it to answer the questions that follow.**

Marks scored	55	60	70	93
Number of pupils	4	3	2	2

(a) Find the number of pupils who sat the examination. (01 mark)

(b) How many pupils scored above the average mark? (03 marks)



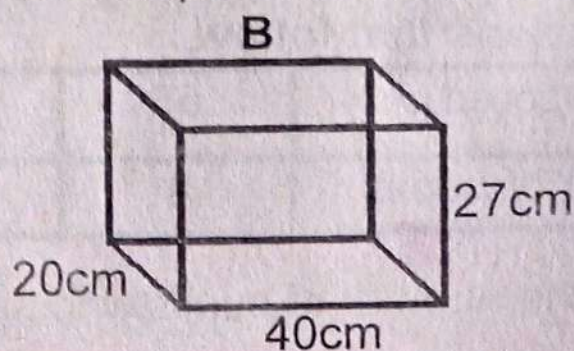
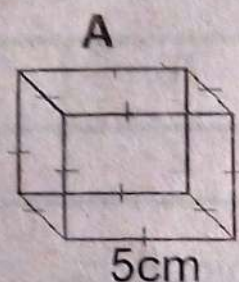
31. (a) Convert **10m/sec** to **km/h**.

(02 marks)

(b) A bus left Kampala at 8:00a.m. and **arrived** at Gulu at **9:45a.m.**  
If it was travelling at a speed of 80km/h, find the distance it covered. (03 marks)



32. The cubes of type A are packed into a box of type B. Study the figures and use them to answer the questions that follow.



(a) How many cubes are packed along the bottom layer? (02 marks)

(b) How many cubes of type A will be packed in a big box B? (02 marks)

(c) Find the volume of the space left unoccupied after packing. (02 marks)