SURE KEY EXAMINATIONS BOARD

PRIMARY LEAVING MAGIC SET EXAMINATION

2022

MATHEMATICS

Time Allowed: 2 hours 30 minutes

Admission 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

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. Add: 75 + 75.

2. Write in words 14,141.

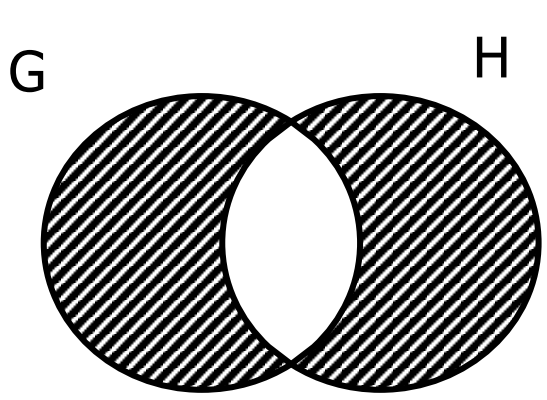
3. Solve: $\frac{2}{3}x = 8$.

4. Simplify: $^{-}5 - {}^{-}7$.

5. Given that Set P = {all odd numbers less than 10}. Find n(P).

6. 51m is directly divisible by 3. If the sum of the digits is 15. Find the value of m.

7. Describe the unshaded region on the Venn diagram below.

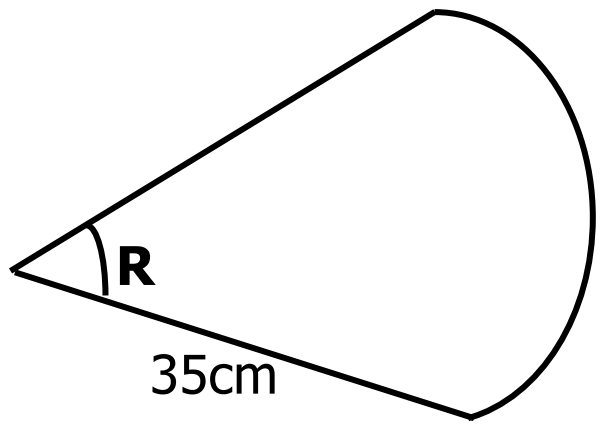


8. The complementary angle of $(2x - 20)^0$ is 40^0. Find the value of x

9. Omara has goats and cows in the ratio of 4:3 respectively. If he has 16 more goats than cows, how many cows does he have?

10. The area of a square room is $36m^2$. What is the total distance around the room?

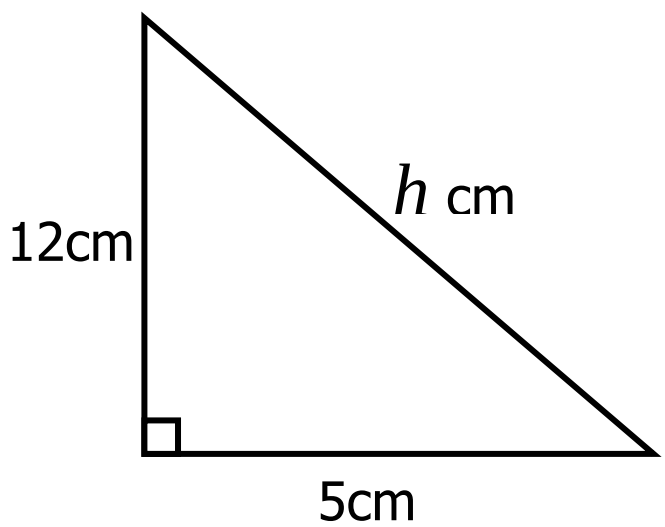
11. The perimeter of the figure below is 114cm. Find the value of **R**.



12. The probability that Tonny will go to the market today is $\frac{2}{7}$. What is the probability that he will not go to the market today?

13. Round off 36.89 to the nearest tenths.

14. Find the value of h in the figure below.



15. A pupil spent $\frac{1}{6}$ of the pocket money on soda and $\frac{1}{4}$ of the remainder on transport and was left with Sh.36,000. How much money did the pupil have at first?

16. What is the ratio increase from 800 to 960?

17. Move four metres backwards and another four metres backwards. Write your last position using integers.

18. A doctor gave 24 pills to the patient. The patient had to take 2 pills each day. For how many days did the dose last?

19. A father is twice as old as his daughter. Their total age is 45 years. How old is the daughter?

20. Workout: 9 + 7 + 2 using a 12 hour clock face.

SECTION B: 60 MARKS

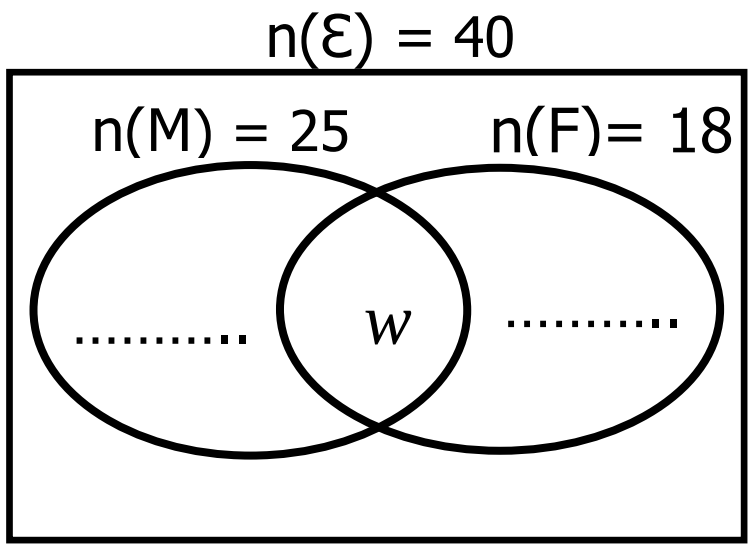
Answer **all** questions in this section

Marks for each question are indicated in brackets

21. In Riyindi SDA Primary School, there are 40 pupils in Primary School, 25 pupils like fishing (F), 18 pupils like Hunting (H), *w* like both Fishing and Hunting.

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

(02 Marks)



(b) Find n(*w*) (02 Marks)

(c) Workout n(H)´.

(02 Marks)

22. (a) Solve: 2(2a + 6) – 3(a + 5) = 0. (03 Marks)

(b) If $x^2 = 81$. Find the value of x . (02 Marks)

23. The sum of 3 consecutive counting numbers is 18.

(a) Find the numbers. (03 Marks)

(b) Workout their range. (01 Mark)

24. Alex went to market and bought the following items,

2½ kg of sugar at Sh.3,000

500g of millet at Sh.6,000 per kg.

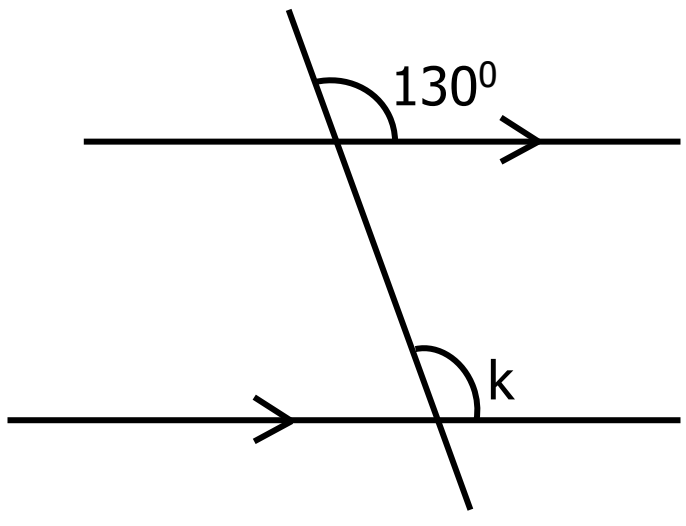
5kg of meat at Sh.10,000.

3 bars of soap at Sh.2,000 per bar.

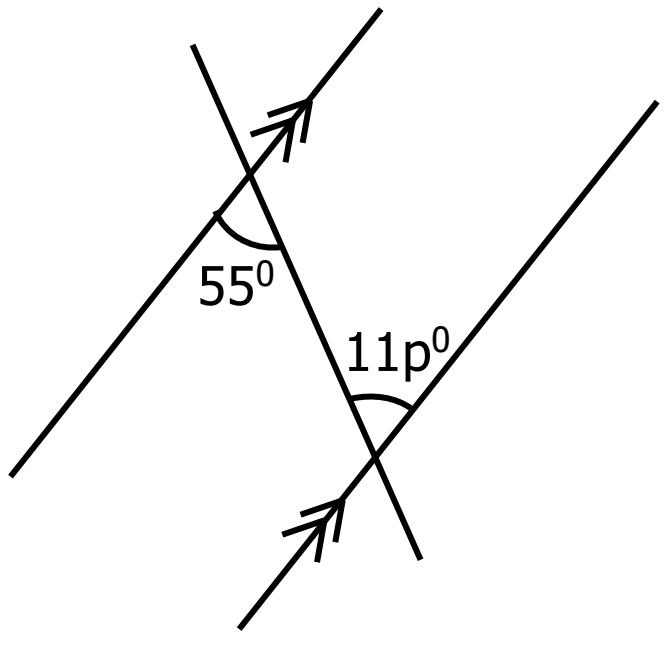
(a) Calculate his total expenditure. (04 Marks)

(b) If he went with Sh.50,000 to the market, how much was his change? (02 Marks)

25. (a) Workout the size of angle k on the figure below. (02 Marks)



(b) Find the value of p. (02 Marks)



26. Otim ate $\frac{4}{9}$ of a sugarcane in the morning and $\frac{2}{9}$ in the afternoon.

(a) Find the total fraction Otim ate. (02 Marks)

(b) Workout the fraction of the sugarcane that remained. (03 Marks)

27. Town M is 60km in the North East of Town N. Town L is 80km on a bearing of 120^0 from Town N.

(a) Draw a rough sketch for the above. (01 Mark)

(b) Taking a scale of 1cm:10km, draw an accurate figure to show the three towns. (04 Marks)

(c) What is the bearing of; (02 Mark)

(i) N from M?

(ii) M from L?

28. The frequency table shows marks obtained by P.7 pupils at Twalibah Islamic Primary School in their Special Mock test.

Marks	Freq	Total
54	3	162
64	2	……
……	3	210
85	……	340

(a) Study and complete frequency table. (03 Marks)

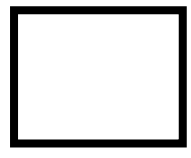
(b) Find the median mark. (02 Marks)

(c) Workout the rage of the mark. (01 Mark)

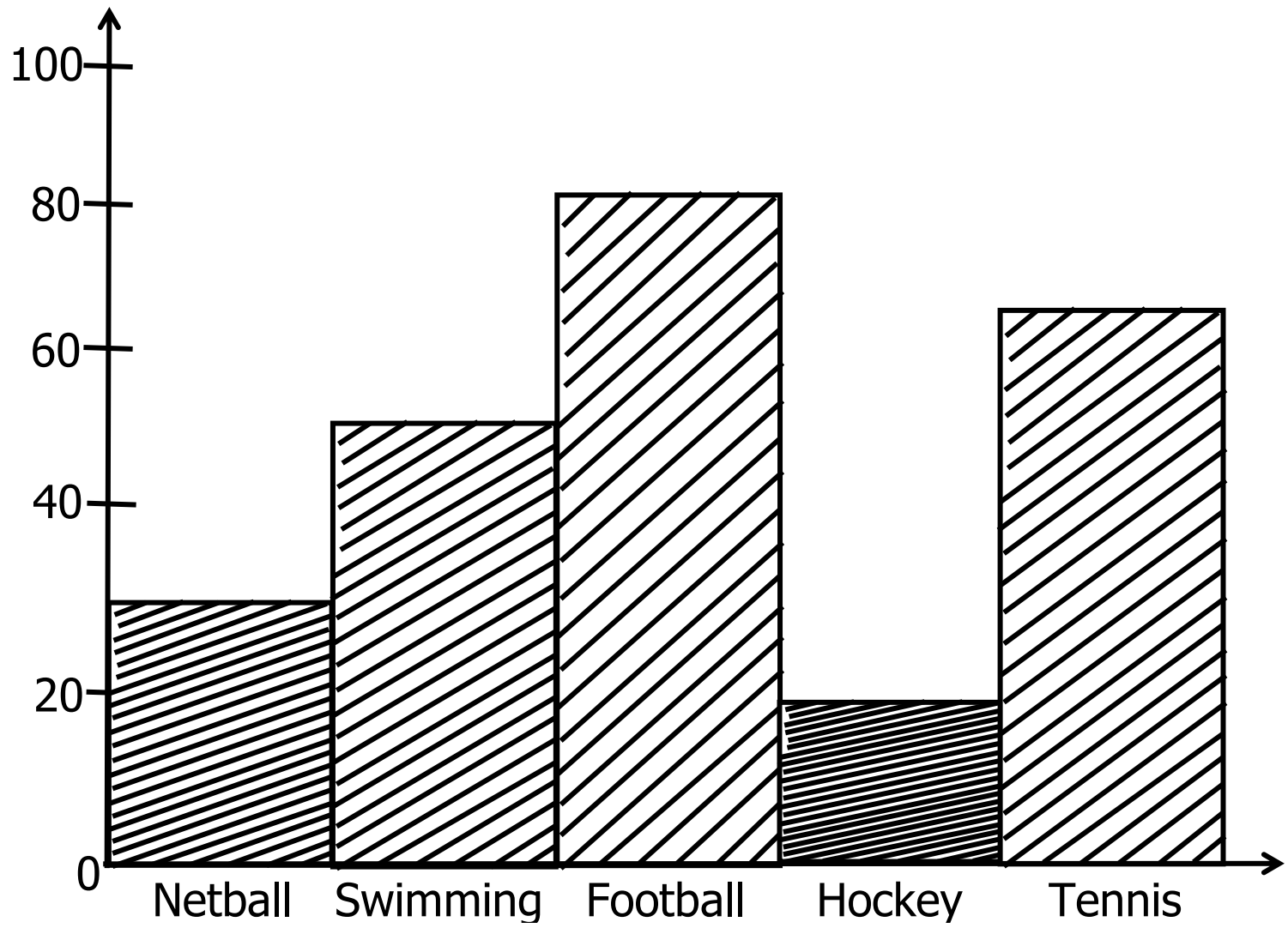
29. Sarah deposited Sh.600,000 in a bank for 8 months. The bank gives an interest rate of 12½% per year. How much money will she have in her account by the end of the period? (04 Marks)

30. (a) Solve: $2(p - 3) - 6 = 2$. (02 Marks)

(b) Workout: $\frac{2x + 1}{3} = \frac{x + 8}{2}$ (03 Marks)



31. The bar graph below represents the number of pupils who registered for different games in a school. (Each pupil registered once)



(a) How many pupils participated in Tennis? (01 Mark)

(b) Which subject had the greatest number of registered pupils? (01 Mark)

(c) What percentage of pupils are swimming? (02 Marks)

(d) If a pupil is picked at random, what is the probability that a pupil picked will play netball? (02 Marks)

32. (a) Change 1101_{two} to decimal base. (02 Marks)

(b) Given that $52_n = 112_{five}$. Find n. (03 Marks)

END