SURE KEY EXAMINATIONS BOARD

PRE PLE UNIQUE SERIES

2022

MATHEMATICS

Time Allowed: 2 hours 30 minutes

EMIS 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 **15 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. Workout: 215 + 45.

2. Write 225,566 in words.

.....

.....

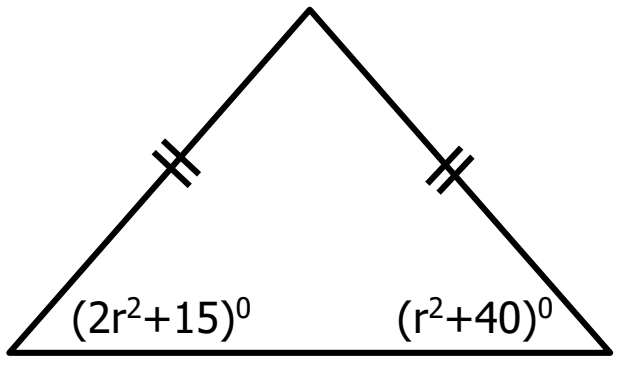
3. Workout: $^{-}5 + {}^{+}2$

4. Given that, Set A = {prime numbers between 4 and 20}
Set B = {odd numbers less than 15}. Find n(A – B)

5. Find the next number in the sequence below.

1, 8, 27, 64, ...

6. Workout the value of r in the figure below.



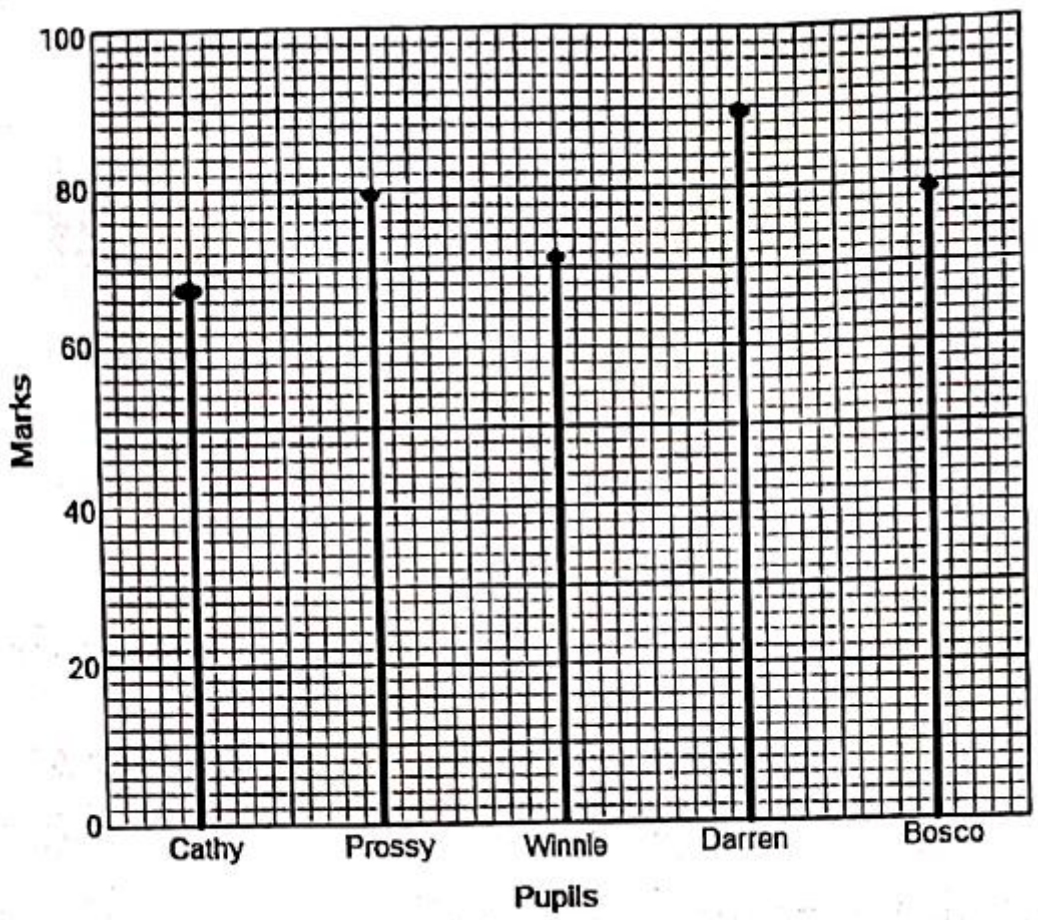
7. During a debate, each side gave 20 views. If the secretary was awarding 3 points for every defended view and deducting a point for every opposed view. How many views did the proposers defend if their final score was 72 points?

8. A father is m years older than his 12 year old son. In 17 years time, the father will be twice as old as his son. How old is the father now?

Turn Over

9. Convert 2,500,000cm^3 to m^3.

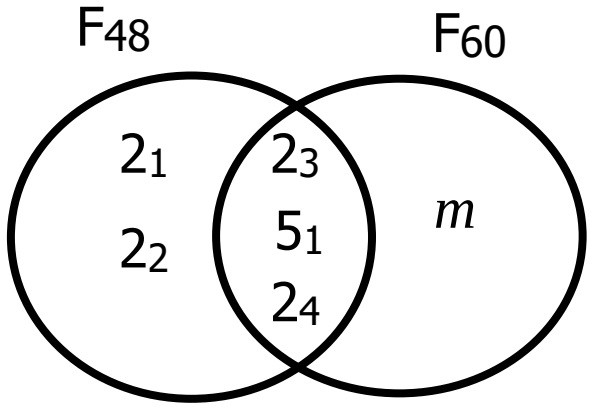
10. The graph below shows marks scored by the pupils in a Mathematics test.



Work out mean mark of the class.

11. A doctor gave a patient a bottle full of pills and prescribed 2 pills to be taken three times a day for 9 days. How many pills were left in the bottle by the end of the seventh day?

12. Find the value of m in the Venn diagram below.



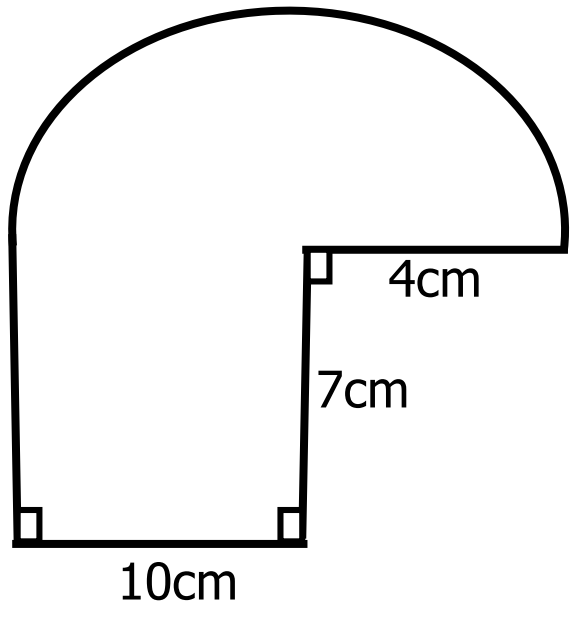
13. A plane takes 7 hours to cover a distance of 28000km. how long will it take to cover 64000km travelling at the same speed?

14. Using a ruler, a pencil and a protractor only, draw an angle of 145^0 in the space provided below.

15. Workout: 3½ ÷ 1¾.

Turn Over

16. Calculate the total area of the figure below. (Use $\pi = \frac{22}{7}$)



17. The sum of four consecutive counting numbers is 46. What is $\frac{1}{5}$ of the first number?

18. The clock face below shows the time at which P.7 pupils at Kabulindi P/S wakeup for morning preps.

Write the time in 24-hours system.

19. Express $\frac{9}{11}$ as a recurring decimal

20. Water in a 20 litre jerycan leaks at a rate of half a litre every 40 minutes. How much water will be left in the jerycan after 4 hours?

SECTION B: 60 MARKS

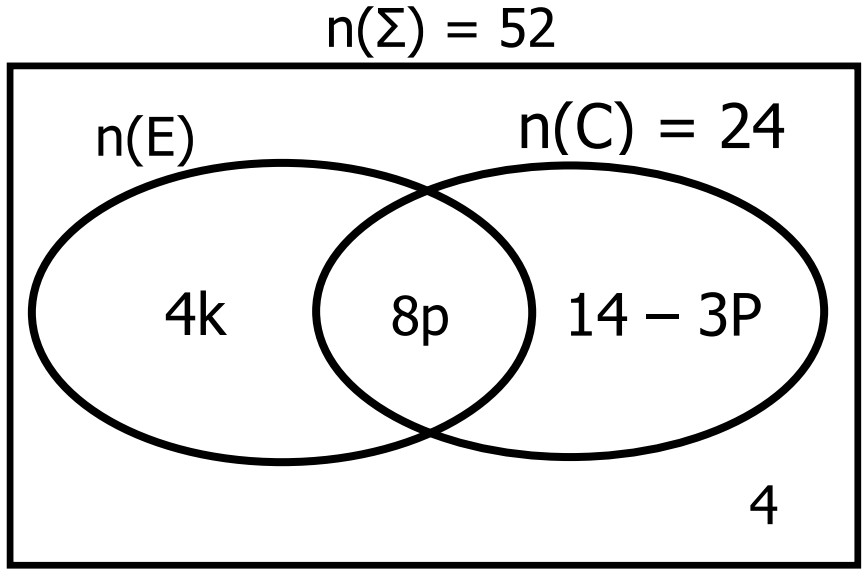
Answer **all** questions in this section

Marks for each question are indicated in brackets.

21. (a) Solve: $\frac{2x-1}{3} = \frac{x+3}{2}$ (03 Marks)

(b) Solve the inequality and write the solution set; $18 \leq 3n \leq 24$.
(02 Marks)

22. Study the Venn diagram below carefully and answer the questions that follow.



(a) Find the value of **p**. (02 Marks)

(b) Determine the value of **k**. (02 Marks)

(c) Find n(C – E)’ (02 Marks)

23. (a) Work out: $1\ 2\ 4_{five}$ + $2\ 3_{five}$ (02 Marks)

(b) Term Three started on Monday. On which day of the week will the term end if the whole term will last for 95 days? (02 Marks)

24. Nakityo distributed her wealth of sh.5,400,000 to her three daughters. Stella got $\frac{1}{4}$ of what Jane got and Sarah got half of what Stella and Jane got. How much wealth did each daughter get? (06 Marks)

Turn Over

25. Study the price list below and answer the questions that follow.

Guava	3 for 1 US dollar
Orange	5 for 1 US dollar
Mango	2 for 1 US dollar

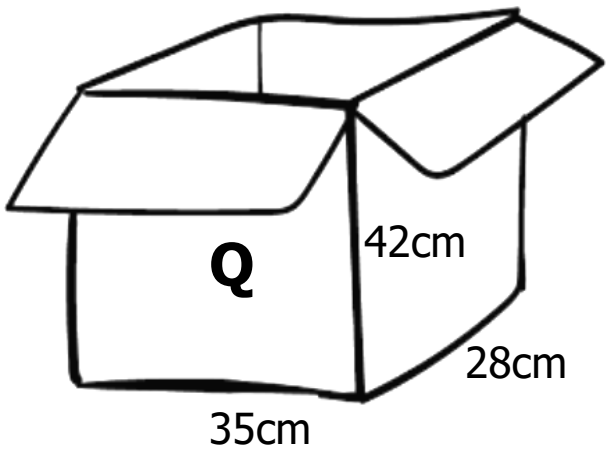
What is the total cost of 5 oranges, 9 guavas and 4 mangoes in Uganda Shillings if the exchange rate is 1 US $ = Ugsh.3654? (04 Marks)

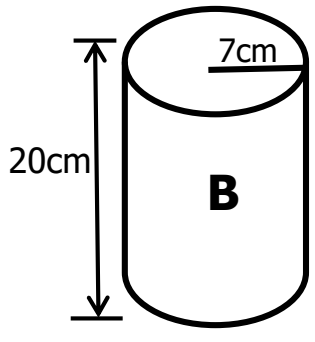
26. The exterior angle of a regular polygon is 60^0 less than its interior angle.

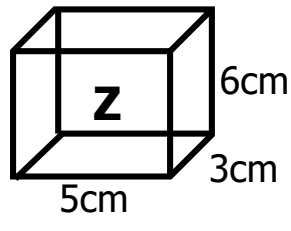
(a) Name the polygon. (03 Marks)

(b) Calculate its interior angle sum. (02 Marks)

27. Two groups were tasked to pack cylindrical tins of size **B** and small boxes of size **Z** in big box of size **Q**.







(a) How many layers of boxes **Z** will fill in big box **Q**? (01 Mark)

(b) How many cylindrical tins of size **B** will fit in big box **Q**? (02 Marks)

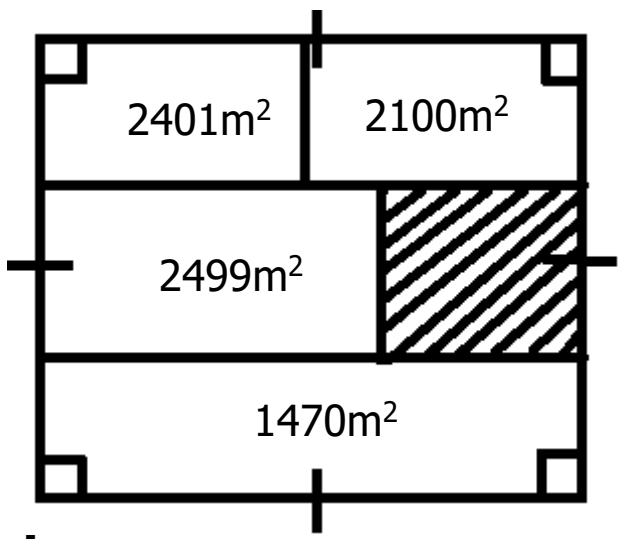
(c) Calculate the space that will remain unfilled in big box **Q** when small boxes of size **Z** are fully packed. (03 Marks)

28. Kafeero bought a T.V set and sold it to Dan for sh.345,000 making a profit of 15%. Dan then sold it to Kyampaire at a loss of 5%.

(a) How much did Kafeero buy the T.V set? (02 Marks)

(b) How much did Kyampaire pay for the T.V set? (02 Marks)

29. Senkomago bought one hectare square piece of land and started selling it in rectangular plots leaving one plot shaded in the figure below.



(a) Calculate the area of the shaded plot of land in square metres.
(02 Marks)

(b) How much did Senkomago get from the sale of all plots if he was selling each square metre at Sh.2000? (02 Marks)

30. The table below shows performance of the 120 candidates that sat for 2020 PLE at Twalibah Islamic Primary School.

Division	I	II	III
Degree	150^0	120^0	X^0

(a) If the divisions in the above table are represented by angle sectors of a Pie-Chart. Find the value of **X**. (02 Marks)

(b) Draw an accurate Pie-Chart to show the above information in the table using 4cm as the radius. (03 Marks)

31. In a village meeting, the ratio of men to women to children was 3:7:5 respectively. $\frac{1}{4}$ of the children were girls and 50% of the men were married. If there were 15 more boys than girls in the meeting;

(a) How many women were in the meeting? (04 Marks)

(b) Express the number of married men as a percentage of the total number of people in the meeting. (02 Marks)

32. Tap A fills a tank in 3 minutes and Tap B fills the same tank in t minutes.

(a) If the two taps fill $\frac{7}{12}$ of the tank in one minute. Find the value of t. (03 Marks)

(b) If 280 litres of water is filled by the two taps in one minute. Find the capacity of the tank. (03 Marks)

END