ANKOLE DIOCESE EXAMINATIONS SECRETARIAT

PRE-MOCK EXAMINATION
2022

MATHEMATICS

TIME ALLOWED: 2 HOURS 30 MINUTES.

INDEX NO.	E M I S NO						Personal No.		

Candidate's Name:..... **Signature:**.....

School Name:..... ..... **EMIS No**.....

Archdeaconry.....

Read the following instructions carefully

1. This paper has **two** Sections: **A** and **B**. Section **A** has **20** questions and Section **B** has **12** questions.
2. All the working for both section **A** and **B** must be shown in the spaces provided. No pieces of paper should be provided for rough work.
3. All working must be done in **blue or black** ball point pen or ink and **NOT** in pencil. Only diagrams and Graph work may be done in pencil.
4. Unnecessary changes of work may **lead to loss of marks.**
5. Any handwriting that cannot be easily read, may **lead to loss of marks.**
6. The use of electronic calculators and Mathematical tables is not allowed.
7. Do not fill anything in the box indicated **"for Examiner's use only"** and those inside the paper.

FOR EXAMINERS' USE ONLY		
QN NO.	MARK	Examiner's Sign
1-5		
6-10		
11-15		
16-20		
21-22		
23-24		
25-26		
27-28		
29-30		
31-32		
TOTAL		

TURN OVER

SECTION A: 40 MARKS

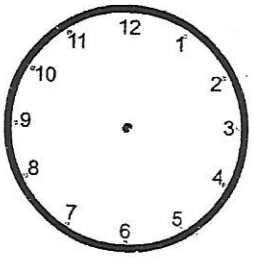
Answer ALL questions in this section.

Question 1 to 20 carry two marks each.

1. Write 9+5 in Roman numerals *(2 mks)*

2. Increase 72 pens in the ratio of 5:4 **(2 mks)**

3. Show seventeen minutes to ten O'clock on the clock face below: *(2 mks)*



4. Kapere has 8.75kg of carry powder to be packed in packets of 0.25kg each. How many packets will Kapere make ? *(2 mks)*

5. Study and complete the sequence below:

   1, 3, 7, 13, 21, ____ *(2 mks)*

6. Simplify : $4k - 5m + 2k - 3m$. *(2 mks)*

7. Write "Twenty thousand, four hundred four" in figures. *(2 mks)*

8. Solve the inequality : $3(x + 4) < 5x - 2$. *(2 mks)*

9. Express $3\frac{1}{2}$ kg to grams. *(2 mks)*

10. What number has been expanded to get $(4 \times 10^2) + (2 \times 10^0) + (6 \times 10^{-1}) + (1 \times 10^{-2})$? *(2 mks)*

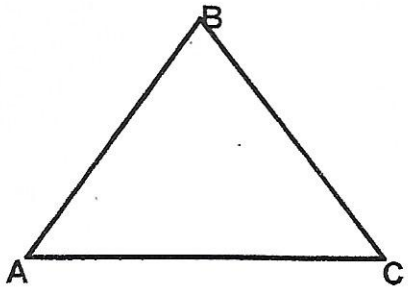
Turn over

11. Given that P = $^{-}4$, Q = 3 and C = $^{-}2$, find the value of $\frac{PQ}{C}$ *(2 mks)*

12. Work out the value of X.
    3 + 4 = X (finite 5) . *(2 mks)*

13. Solve : $2^{3n} \div 2^{n} = 16$. *(2 mks)*

14. Bisect angle **ABC** in the figure below. ***(2 mks)***

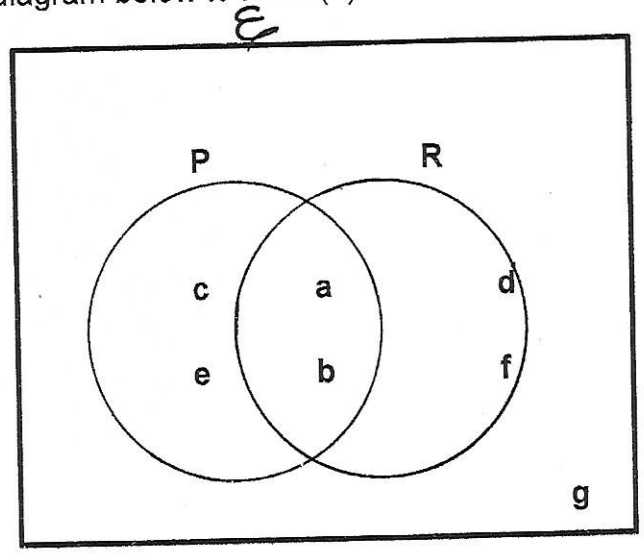


15. In a car park there are 112 cars. The probability that a car picked at random from the park is made in Japan is $\frac{5}{8}$. How many cars are not made from Japan ?
(2 mks)

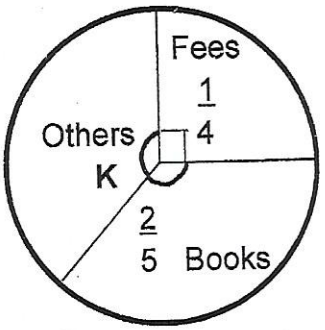
16. The price of a skirt is increased by 10%. If the new price is shs. 44,000, find the original price of the skirt. ***(2 mks)***

Turn over

17. Use the Venn diagram below to find $n(P)'$ *(2 mks)*



18. Study the pie-chart below and use it to find the value of K. *(2 mks)*



19. Find the square root of $5\frac{4}{9}$. ***(2 mks)***

20. A fisherman saw a boat on water on a bearing of 060^0. What was the bearing of the Fisherman from the boat ? ***(2 mks)***

Turn over

SECTION B: 60 MARKS

21. Given the digits 2, 0 and 8.

a) Form the smallest 3-digit number using the digits above. *(1 mk)*

b) Write the numeral formed in **(a)** above in scientific notation. *(2 mks)*

c) Show the above numeral on the abacus. *(2 mks)*

22. The following items were bought by a pupil for the school:-
2 dozens of books at shs. 6,000 @.
A geometry set at shs. 3,500.
$1\frac{1}{2}$ dozens of pencils at shs. 3,000 a dozen.
6 pens at shs. 500 per pen.

a) Calculate the total expenditure. *(4 mks)*

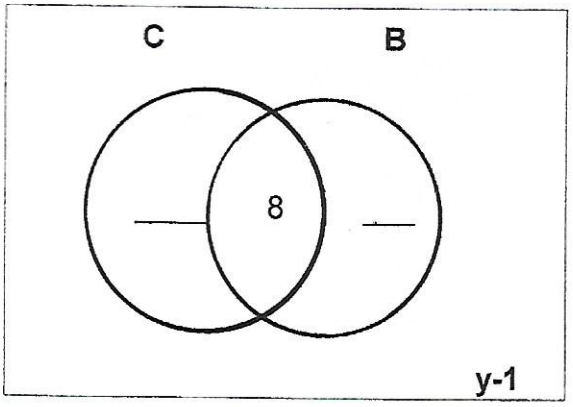
b) Work out his change if he went with shs. 30,000 to the shop. *(1 mk)*

23.a) Subtract 6m -8 from 4 m -6. ***(2 mks)***

b) During an interview held at Mbarara District Service Commission, a facilitator awarded two points for every correct response given and deducted one point for every wrong response given. If a facilitator asked twenty questions and a participant scored 25 points. How many correct questions did the participant answer correctly ? ***(3 mks)***

24. In a party, 50 guests like chicken (C), 2y guests like beef (B) only, 8 guests like both chicken and beef and y-1 like neither of the two dishes.

a) Use the information given to complete the Venn diagram below. ***(2 mks)***



Turn over

b) If 8 pupils do not like chicken, find the value of y . ***(2 mks)***

c) A dish representative is to be selected, what is the probability that he likes none of the dishes. ***(1 mk)***

25. A trader bought 300 bags of maize each weighing 30 kg.

a) How many tonnes of maize did the trader buy ? ***(3 mks)***

b) If he hired a vehicle which carries 3 tones per trip, how many trips did he make to transport all his maize ? ***(2 mks)***

26. A bus left Kampala for Masaka travelling at a speed of 60km/hr. After a $2^1/_2$ hour drive, it changed its speed to 40 km/hr and reached Masaka after 2 hours.

a) How far is Kampala from Masaka ? ***(3 mks)***

b) Calculate the average speed of the bus for the whole journey. ***(2 mks)***

Turn over

27. The table below shows the rate at which different currencies were sold and bought in Commercial bank during the month of May. Use it carefully and answer the questions that follow.

Currency	Selling in Ug.shs	Buying in Ug.shs
1 US dollar ($)	3,650	3,800
1 Euro (€)	4,000	4,020
1 Rwandese franc	4.0	5.0

a) If Musa had Ug.shs. 15,200,000, how many Euros did he get ? ***(2 mks)***

b) Obadia came from Rwanda with 5,292,500 Rwandese francs and exchange for US Dollar . How many dollars did he get from the bank ? ***(3 mks)***

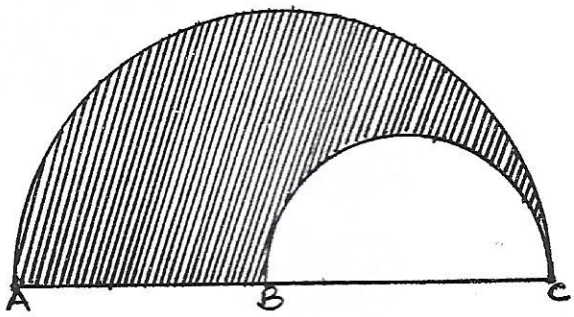
28 a) Using a ruler, a pencil and a pair of compasses only, construct a triangle **PQR** in which Angle **PQR** = 30^0, **PRQ** = 45^0 and line **QR** = 10cm. ***(4 mks)***

b) Measure $\overline{PQ}$ *(1 mk)*

29. In the diagram below **AC** = 56cm and **BC** is half of **AC**. Find the area of the shaded part.

(5 mks)

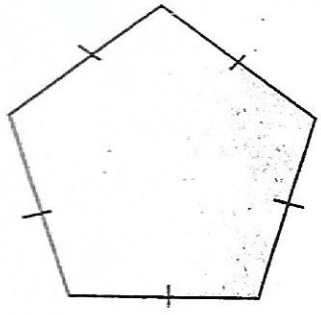
Take $\pi = \frac{22}{7}$



30. a) Find the number of sides of a regular polygon with an exterior angle of 45^0.

(2 mks)

b) By illustration, how many triangles has the polygon below ? *(1 mk)*



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Turn over

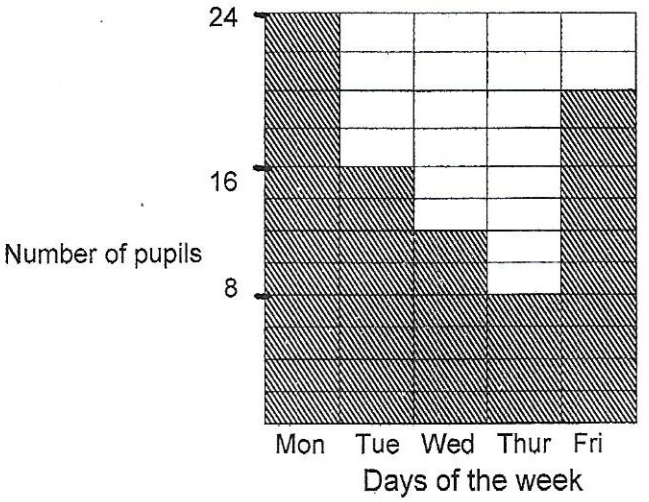
c) Calculate the interior angle sum of the polygon above. ***(2 mks)***

31. A milk vendor sells 300 litres of milk daily using a cuboidal container that measures 15 cm by 10 cm by 8 cm.

a) How many such containers does he sell in a week ? ***(3 mks)***

b). If each container costs shs. 1800, how much money does he collect from the milk in a week ? ***(2 mks)***

32. The graph below shows the number of pupils absent in a class of 60 pupils for a week. Use it carefully to answer the questions about it



a) Which class had the highest attendance ? ***(1 mk)***

b) Find the total number of pupils who attended the whole week. ***(2 mks)***

c) How many more pupils were absent on Friday than Thursday ? ***(2 mks)***

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