DIVINE EDUCATION CENTRE

PRE-PRIMARY LEAVING EXAMINATION

2022

MATHEMATICS **(ITEM 3of 4)**

Time allowed: 2hours 30 minutes

Random No.						Personal No.		

Candidate's name: .....

Candidate's Signature: .....

District ID:

Read the following instructions carefully:

1. Do not write your **school** or **district name** anywhere on this paper.
2. This paper has two sections **A** and **B**. Section **A** has **20 questions** and **section B** has **12 questions** .This paper has **12 pages** printed 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 be easily read may lead to loss of marks.
7. Do not fill anything in the table indicated **"For examiners' use only"** and the 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. Work out: 573 **–** 141

2. Round off 847 to the nearest tens.

3. Express 7530 kilogrammes as tonnes .

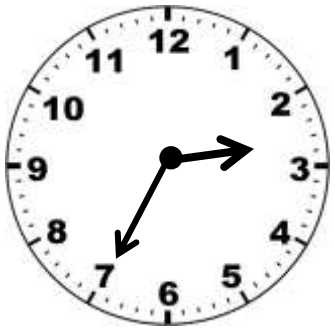
4. Complete the sequence below and find their range.
   3, 1, $^{-}2$, $^{-}7$, $^{-}14$, _____

5. What number has been expressed in scientific notation to get;
   5.47×10^{3} ?

6. Simplify: 7m + 5n**–** 4m **–** 3n

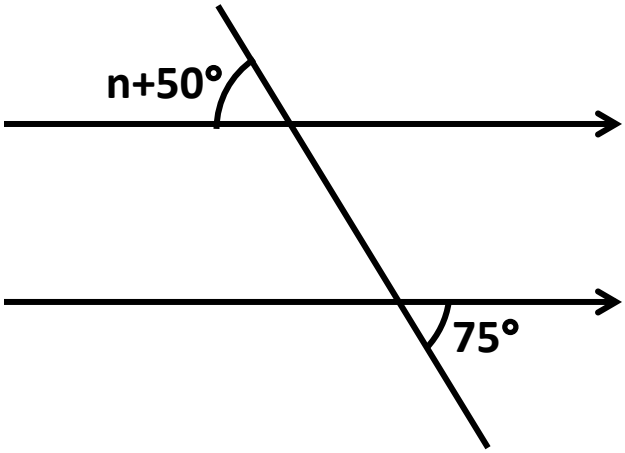
7. If set Q has 15 proper subsets. Find n(Q)

8. Write the morning time shown on the clock face below in the 24 hour clock system.



9. Using a pair of compasses, ruler and a very sharp pencil only, construct an angle of 105° in the space provided below:

10. In the diagram below, find the value of **n** in degrees.



11. Work out : $\mathbf{4\frac{2}{3}} \times \mathbf{1\frac{2}{7}}$

12. Solve for n: $\frac{2n}{5} - 3 = 3$

13. The list below shows the marks obtained by Joseph in a mathematics test.
70,90,80,60 and k.
If his least mark was k and 40 as his range. Find his median mark.

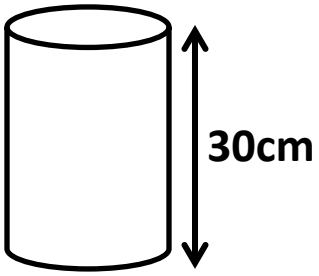
14. The smallest number that can be divided by either 12 or w leaving 3 as a remainder is 39. The Greatest Common Factor (GCF) of the two numbers 12 and w is 6. Find the value of w

15. Amos planted 40 orange trees round his rectangular compound at intervals of 5 metres from each tree.
Calculate the total distance round his rectangular compound.

16. Kagoda bought 3 plates and 2 cups at sh.6500. The cost of each plate was sh.1500. How much did he pay for each cup?

17. A cheetah was running at a speed of 30 metres for every 3 seconds. Express the speed it was running in km/h

18. The base area of the figure below is 616cm^2.



Calculate its capacity in litres.

19. In a school garden, a fifth of the trees are mango trees and a half of the remainder are orange trees. If the garden has 16 orange trees, how many mango trees are in the garden?

20. Jakisha rode a car wheel of radius7cm for a distance of 44km. How many revolutions did it make?

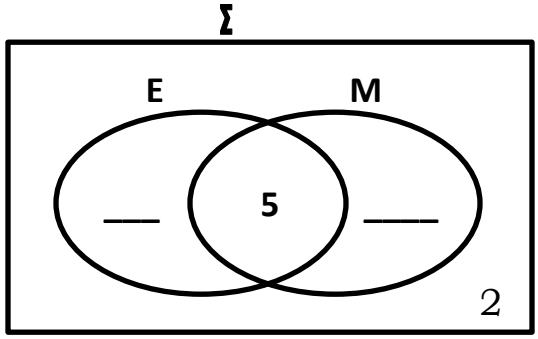
SECTION B: 60MARKS

*Answer **all** the questions in this section*

Marks for each question are indicated in the brackets

21. In a class, 15 pupils like Mathematics (M), 5 pupils like both Mathematics and English(E), k pupils like only one subject while 2 pupils like neither of the two subjects.

(a)Use the given information to complete the venn diagram below. ***(2marks)***



(b) If 9 pupils do not like mathematics, find the number of pupils in the class. ***(3marks)***

22. (a) Find the number that has been expanded to give: $(1x3^2) + (2x3^0)$ ***(2marks)***

b)Given that $23_y = 31_{four}$. Find the value of y ***(2marks)***

23. A regular polygon has 12 right angles.
a) Name the polygon. ***(3marks)***

b)Calculate the total of all its interior angles. ***(2marks)***

24. (a)Twelve days ago from today was Friday.
What day of the week is today? ***(3marks)***

(b)Use a clock dial to work out: $2 \div 3 \pmod 5$ ***(2marks)***

25. Mr. Mutyaba wanted to cover his floor measuring 3.5m by 3m with square tiles of 50cm each. How many square tiles will he need to cover the entire floor? ***(4marks)***

b)If each box containing 10 pieces of square tiles costs sh.50,000. How much money will he need to buy all the required tiles for him to cover his room completely? ***(2marks)***

26. a) Solve for y: $2^y \times 2^2 = 8$ ***(2marks)***

b)Solve and give the first three values of the solution set for :

$4 - 2m < 6$ ***(3marks)***

27. The table below shows how different types of crops are bought and sold on Mr.Bossa's food store. Use it to answer the questions that follow.

Type of crop	**Buying**	**Selling**
1kg of G.nuts	Sh.3500	Sh.3700
1kg of Rice	Sh.2000	Sh.2200
1 kg of maize	Sh.550	Sh.650

a)One day, Mr.Bossa made a profit of sh.24,000 on G.nuts.

Find in kilogrammes ,the mass of G.nuts sold. ***(2marks)***

b)Paul had 600 kilogrammes of maize. He exchanged them for rice, the rice was packed in small bags of 25 kilogrammes each.

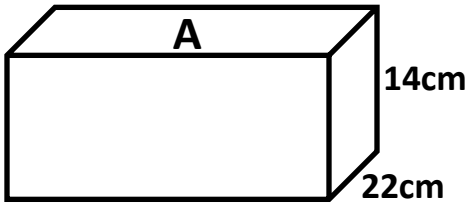
How many small bags did he get? ***(3marks)***

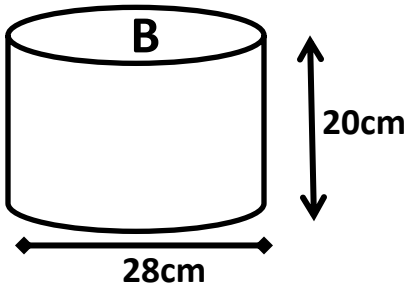
28. A candidate spent $\frac{1}{4}$ of her pocket money on buying shoes, sh.75,000 on books, $5\frac{1}{3}$% of the remainder on pens and $\frac{71}{200}$ on savings.

a)If her pocket money was sh.200,000. Calculate the fraction of her pocket money she spent on buying the pens. ***(3marks)***

b) How much money did she save? ***(2marks)***

29. The two containers **A** and **B** below when filled with water hold the same capacity. Study carefully and use them to answer the questions that follow.





a) Find the length of container **A**. ***(4marks)***

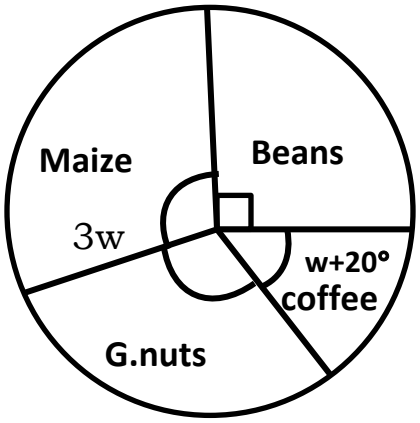
b)If the curved face of container **B** is cut to form a rectangular plate whose width is 20cm. Calculate the length of the plate formed. ***(2marks)***

30. Kiptegeyi left town **M** for town **N** at 11:30a.m running at a speed of 20km/h for 2 hours. He left town **N** at 2:00p.m for town **P** using a speed of 16 km/h. If he reached town **P** at 5:30p.m, calculate his average speed for the whole journey. ***(5marks)***

31. The pie chart below shows 180 acres of land which Mr.Bukulu used to plant different crops. He planted 25 acres of G.nuts.
Use it to answer the questions that follow.

a)Find the size of land he used to plant coffee.

(4marks)



b)Express as a percentage ,the size of land used to plant beans.
(1mark)

32. Hassan moved from his home to the Bus park a distance of 60km on a bearing of 135° . After reaching the Bus park, he continued to the market which is 50 km away on a bearing of 060° from the Bus park .
a)Using a scale of 1cm to represent 10 km, draw an accurate diagram to show the route of Hassan. ***(5marks)***

b)Find the shortest route between the market and his home. ***(1mark)***

END