DIVINE EDUCATION CENTRE

MOCK EXAMINATIONS

2022

MATHEMATICS (SPECIAL SET **2**)

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		

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Turn Over

SECTION A: 40 MARKS

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

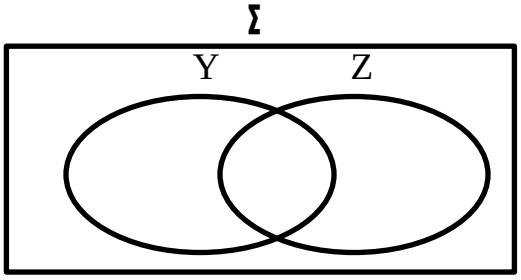
Questions **1** *to* **20** *carry two marks each*

1. Work out: 44 x 2

2. Write in numerals: " Four hundred four thousand, forty six"

3. Simplify: 5q – 5p + q + 2p

4. In the Venn diagram below shade the complement of set **Z**

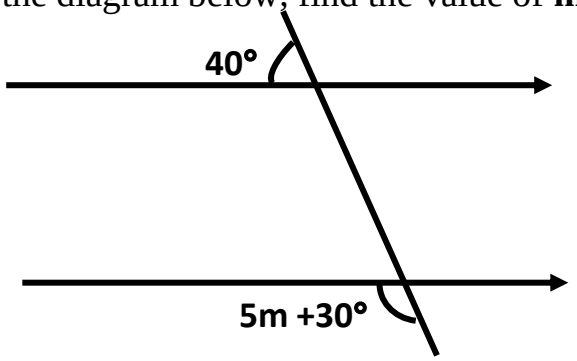


5. Work out : $2^3 + 5^0$

6. Hanisha bought 23.5 kg of sugar.What is the weight of the sugar she bought in grammes?

7. Using a pair of compasses , ruler and a very sharp pencil only, construct an angle of $\mathbf{52\frac{1}{2}°}$

8. In the diagram below, find the value of **m** in degrees.



9. The area of a semi circle is $77dm^{2.}$ Find the total distance round it?

10. An English test started at 11:55a.m. If the test lasted for 1 hour and 15 minutes. At what time did it end in the 12 hour clock system?

11. Find the mean of 8y, (7y─3), 5, 2 and 6.

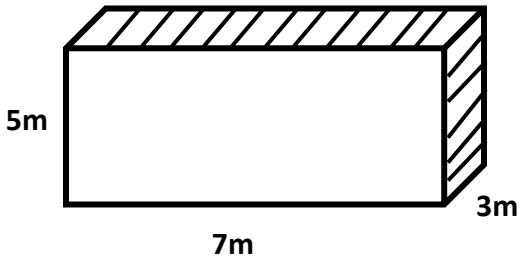
12. Simplify: -5 + -2

13. Work out: $\frac{2}{3} \times \left(\frac{1}{2} - \frac{1}{4}\right) \div \frac{1}{3}$

14. Work out the number which has been prime factorized to give
{ 2_1, 2_2, 2_3, 3_1}

15. Solve for n: $2^n \times 8 = \frac{1}{32}$

16. Calculate the **total area** of the **shaded faces** in the figure below.



17. A motorist travels 64km in 40 minutes. Find the speed of the motorist in km/hr.

18. When marking a test, a teacher awarded **3 marks** for every correct answer and subtracted **1mark** for every wrong answer. The test contained 20 questions. If Jacob scored 36 marks , how many correct answers did he get?

19. In a tin, the ratio of blue pens to red pens is 3:2. If there are 6 more blue pens than red pens, how many pens are in the tin altogether?

20. Abbey bought five thousand shilling airtime cards numbered from 002954657809 to 002954657858. How much money did Abbey pay for the airtime?

SECTION B: 60 MARKS

Answer **all** *questions in this section.*

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

21.a) Given that $\mathbf{24_{w}} = \mathbf{20_{seven}}$ .Find the unknown base. ***(3marks)***

b)Work out : $101_{two} \times 11_{two}$ ***(2marks)***

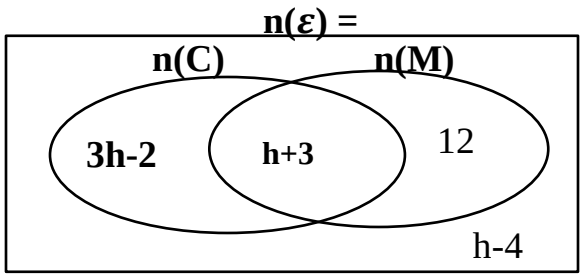
22.Adongo had sh.60,000 and bought the following items in the table below.

Item	**Quantity**	**Unit cost**	**Total cost**
Cooking oil	$3\frac{1}{2}$ litres	Sh_____	Sh .17500
Rice	2kg	Sh .4500	Sh_____
Sugar	____kg	Sh .3500	Sh.1750
Meat	2kg	Sh____	Sh_____
	Total expenditure		**Sh.56250**

a) Complete the table above correctly. (show the working) ***(5 marks)***

b) If she was given a discount of 10% , how much money did she pay for the items? ***(1mark)***

23. The venn diagram below shows the number of pupils who eat meat(M) and chicken(C)

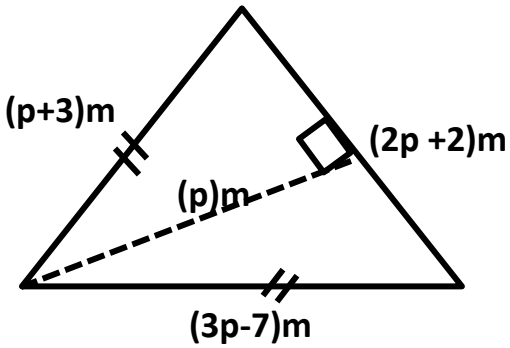


a)If 22 pupils eat meat complement, find the value of **h.** ***(3marks)***

b)How many pupils are in the class? ***(2marks)***

24. The figure below is of a school garden, study it carefully and use it to answer the questions that follow.

a)Find the value of **p** ***(2marks)***



b)Find the area of the school garden. ***(3marks)***

25. The table below shows the number of candidates who did the Mathematics test. Use it to answer the questions that follow.

Marks scored	80	90	60	70
Number of pupils	8	2	6	4

a) How many candidates did the test? ***(1 mark)***

b) Find the modal score. ***(1 mark)***

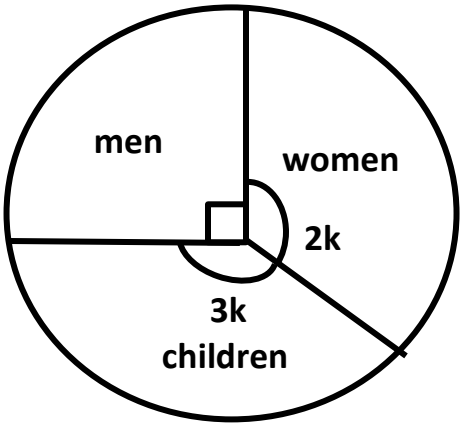
c) Work out the mean score for the candidates who scored above 70.
(3marks)

26. Ojok is 5 years younger than Kenneth, James is twice as old as Ojok.
How old is Ojok if the age of James is 30? ***(4marks)***

27.a) Work out: $\frac{\mathbf{0.37 - 0.12}}{\mathbf{0.21 + 0.04}}$ ***(3marks)***

b) Express 0.2727… as a common fraction in its simplest form. ***(3marks)***

28. The pie chart below shows the number of people in Nabutti vilage.
Study it carefully and use it to answer the questions that follow.



a)Find the value of k. ***(2marks)***

b)If there are 2700 men in Nabutti village , how many people are in the whole village?

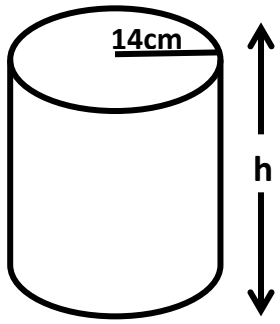
(3marks)

29.A motorist covered a distance of 180km in 3 hours on his return journey he drove at 90km/hr.

a) How long did he take on the return journey? ***(2 marks)***

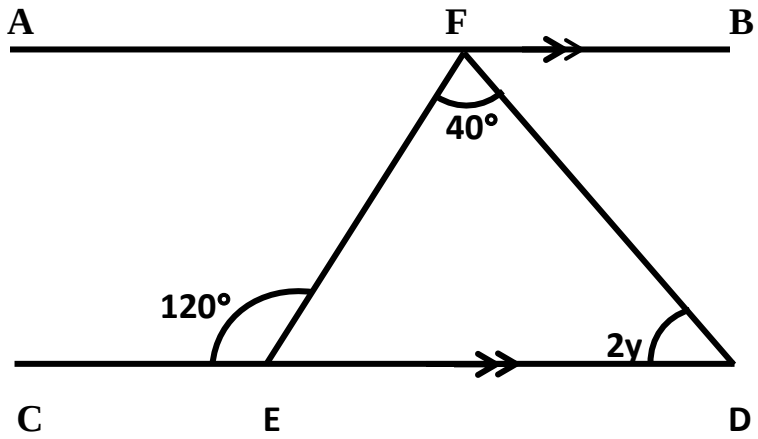
b) Work out the average speed for the whole journey. ***(3 marks)***

30. Below is cylindrical tin of radius 14cm . The base area of the tin is $616cm^2$.
If the capacity of the tin is 24.64 litres.
a) Find its height. ***(3marks)***



b)If the tin is rolled on the ground thrice, what distance will it cover in metres?
(2marks)

31. In the figure below, line AB is parallel to line CD , angle EFD=40° and angle CEF=120°.



a) Find the value of y in degrees. ***(2 marks)***

b) Work out the size of angle EFA ***(2 marks)***

32a)Using a pair of compasses, ruler and a very sharp pencil only, construct a triangle PQR where line PQ=7cm ,angle PQR=75° and angle QPR=45°. ***(4marks)***

b) Measure line PR=……cm ***(1mark)***

END