DIVINE EDUCATION CENTRE

P.7 MID TERM 1 EXAMINATION

2023

MATHEMATICS

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)

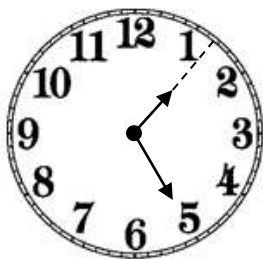1- Workout: 45 – 17

2- Write **"Fourteen thousand, forty"** in figures.

3- Simplify: 3w – (w-2)

4- Round off 4.46 to the nearest tenth.

5- Given that 2p + 20^0, 30^0 and 90^0 are angles on a straight line.
    Find the value of p.

6- Victor had his lunch at the time shown on the clock face below.
    At what time did he have his lunch?

7- The mean of y, 5, 3 and 2 is 3. Find the value of y.

8- Given that M = { multiples of 4 less than 20}. Calculate the number of subsets in set M.

9- Convert 8_{ten} into a binary base.

10- Using a pair of compasses, ruler and a very sharp pencil only, construct an angle of 135^0 in the space below.

11- The cost of 3kg of maize flour is sh. 7,500. If Moses paid sh. 125,000 for a sack of maize flour at the same rate, calculate the weight of the sack of maize flour.

12- After selling a phone at sh. 90,000, Kibirige realized a loss of sh. 30,000. What was the cost price of the phone?

13- Given that a is a third of b and b = 2. Find the value of a + b

14- Muwanguzi has 7 T. shirts and 5 shirts in his suitcase. Calculate his probability of selecting a T. shirt at random from the suitcase.

15- Find the biggest number of pupils who can be given 12 or 15 apple and no apple remains.

16- The price of a watermelon was decreased from sh. 5000 to sh.4000. Calculate the percentage decrease in the price of the watermelon.

17- Convert 10m/second into km/hr.

18- The temperature of juice in a fridge dropped by 3°C to -5 ^{0}C. What was the old temperature of juice?

19- A farmer planted 100 eucalyptus trees in his garden in a straight line. The distance from one tree to another tree was 600cm each. Calculate the distance from the first to the last tree in metres.
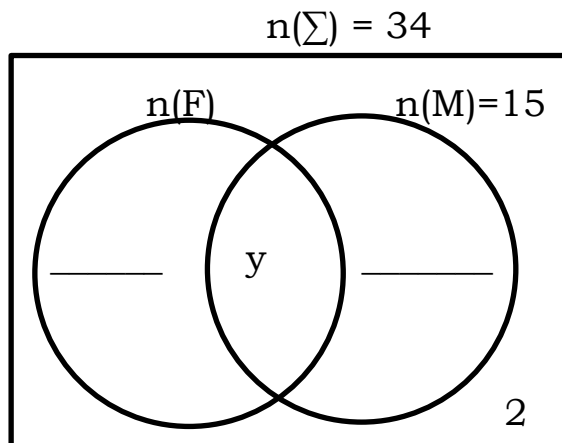
20- The base area of a rectangular box is 40cm^2. Find its height if it has a volume of 200cubic centimetres.

21- At a wedding ceremony, 34 guests were invited. 15 guests ate meat (M), 20 guests ate fish(F), y guests ate both fish and meat while 2 guests did not eat any of the two dishes.

a) Use the above information to complete the venn diagram below.

$n(\Sigma) = 34$ 　　　　　　　　　　　　　　 *(2marks)*

b) How many guests did not eat fish? 　　　　　　　　 *(3marks)*

22- Given the digits 4, 0, 6

a) Write all the possible 3-digit numbers that can be formed using all the above digits. 　　　　　　　　　　　　　 *(2marks)*

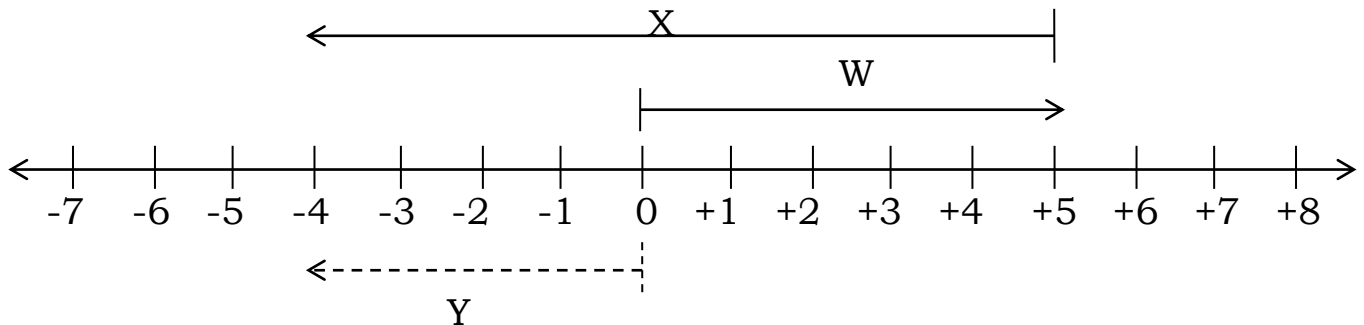*b)* Find the sum of the largest and smallest 3-digit numbers formed in question 22(**a**) above. 　　　　　　　　　　 *(2marks)*

23- The sum of 3 consecutive counting numbers is 24. If the first number is k. find the value of k. **(2marks)**

b) The LCM of two numbers is 36 and their GCF is 6, find the first number if the second number is 18. **(2marks)**

24- Study the number line below and use it to answer the questions that follow.
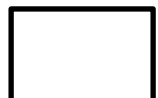

a) Name the integers represented by; **(1mark@)**

(i) Y =   (ii) W=

(iii) X =

b) Write down the mathematical sentence for the above number line. **(2marks)**

25- A certain school, the number of pupils who reported on the first day for term one in P.7 , P.6 and P.5 was in the ratio of 3: 5: 2 respectively. If 18 more pupils reported in P.6 than P.7, how many pupils reported in each class? **(6marks)**

26- Solve $2^{3k} \div 8 = 1$ **(2marks)**

b) Solve the inequality; $7 < 3p - 2 < 16$ and find the solution set. **(3marks)**

27- Stella bought the items as shown in the table below.

Item	Quantity	Unit cost	Total cost
Meat	1 ½ kg	Sh. 15,000	Sh. _____
Sugar	3kg	Sh. _____	Sh.14,400
Soap	_____bars	Sh. 6, 500	Sh.19,500
	Total expenditure		Sh._____

*a)*Complete the table above.   *(4marks)*

b)If she remained with sh. 3,600 after buying all the items, how much money did she have at first?   *(2marks)*

28- Dannah filled $\frac{4}{5}$ of a tank with water. The tank had a diameter of 70cm and height of 100cm. Calculate the litres of water needed to fill the tank to its full capacity.   *(5marks)*

29- In a basket of 45 eggs, 20% of them are bad eggs and the rest are good eggs.

a) How many good eggs are in the basket?   *(3marks)*

b) Express the number of bad eggs as a fraction of all the eggs in the lowest term.   *(2marks)*

30- At a stationary, the cost of a pen is twice the cost of a pencil. The cost of a book is sh. 1,200 more than the cost of a pen. If Deborah paid sh.900 for a pen and a pencil, how much will she pay for the two books?   *(5marks)*

31- Using a pair of compasses, ruler and a pencil only;

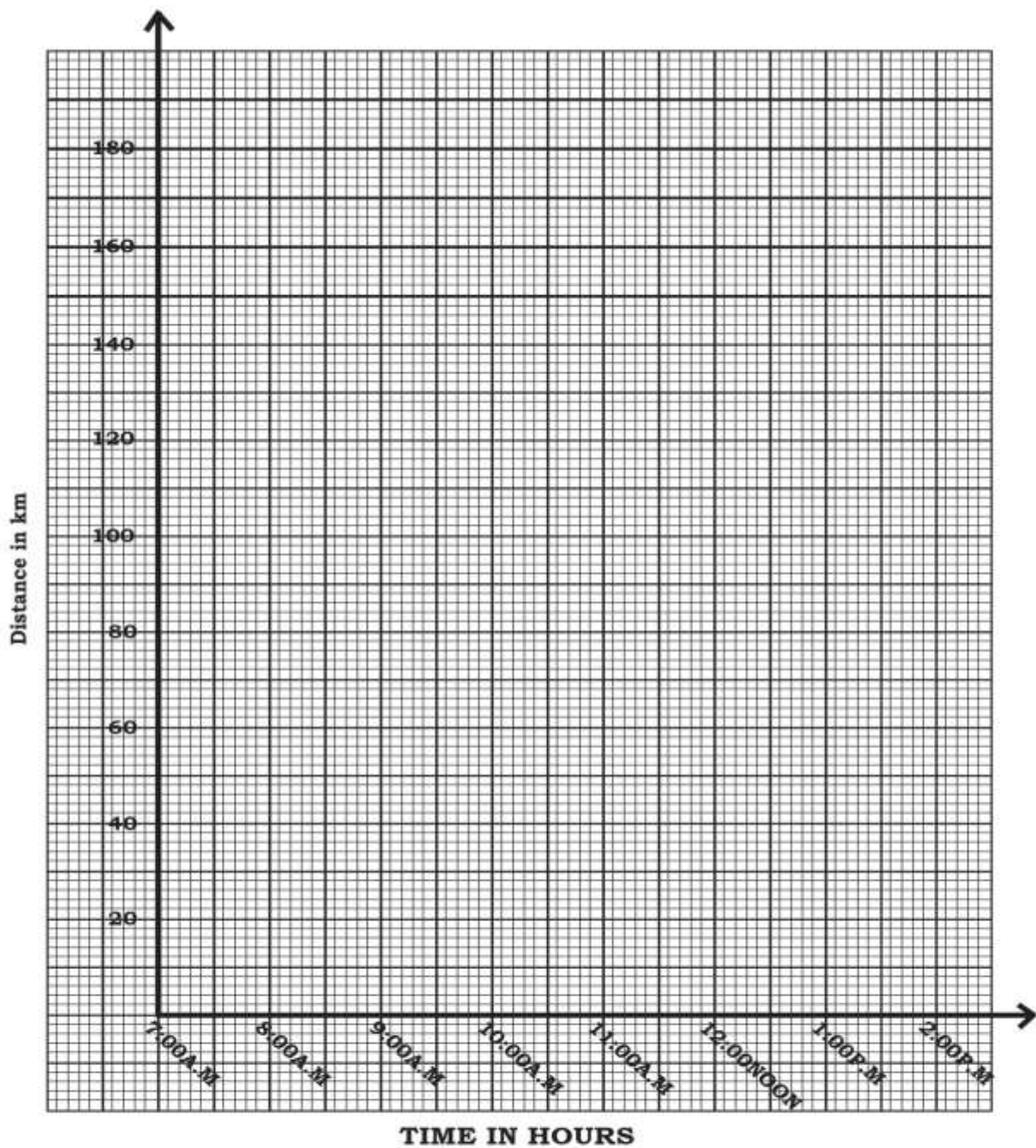a) Construct a square ABCD whose one side is 5.4cm   *(4marks)*

b) Measure diagonal AC = _____cm   **(1mark)**

32- A cyclist left home for town at 7:00a.m using a speed of 50km/hr for 2 hours. He found traffic jam which took 1 ½ hours. He later continued to town using a speed of 32km/hr for 2 ½ hours.

(a) Use the above information to show the cyclist journey on the graph below.   **(3marks)**

TIME IN HOURS

b) Calculate the average speed for the whole journey.

(2marks)