



DIVINE EDUCATION CENTRE

**P.7 MID TERM 1 EXAMINATION**

**2023**

**MATHEMATICS**

***Time allowed: 2 hours 30 minutes***

Random No.						Personal No.		

**Candidate's name:** .....

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

**District ID:**

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**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.

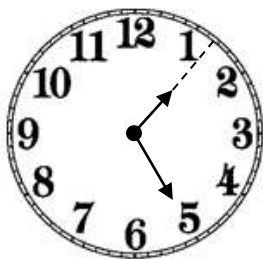
3- Simplify:  $3w - (w-2)$

4- Round off 4.46 to the nearest tenth.

5- Given that  $2p + 20^\circ$ ,  $30^\circ$  and  $90^\circ$  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  $M = \{ \text{multiples of 4 less than 20} \}$ . Calculate the number of subsets in set  $M$ .

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

10- Using a pair of compasses, ruler and a very sharp pencil only, construct an angle of  $135^\circ$  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  $3^{\circ}\text{C}$  to  $-50^{\circ}\text{C}$ .  
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.

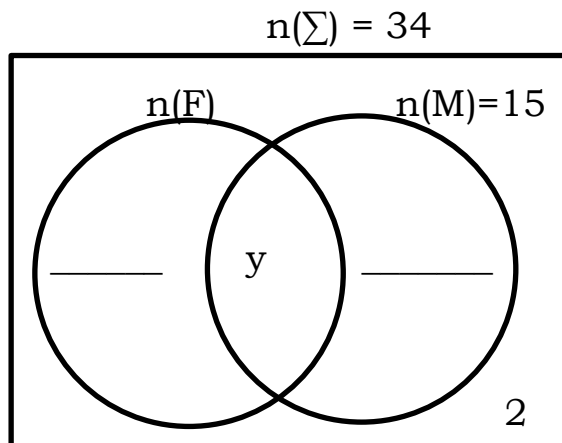
20- The base area of a rectangular box is  $40\text{cm}^2$ . Find its height if it has a  
volume of 200cubic centimetres.



**SECTION B: (60 MARKS)**

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.



**(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.

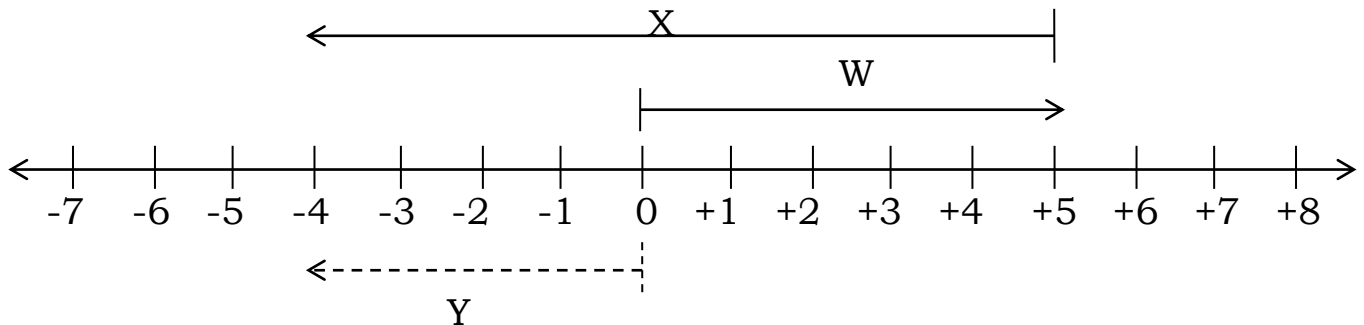
**(2marks)**



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.



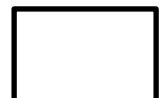
a) Name the integers represented by; **(1mark@)**

(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 $\frac{1}{2}$ 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)**

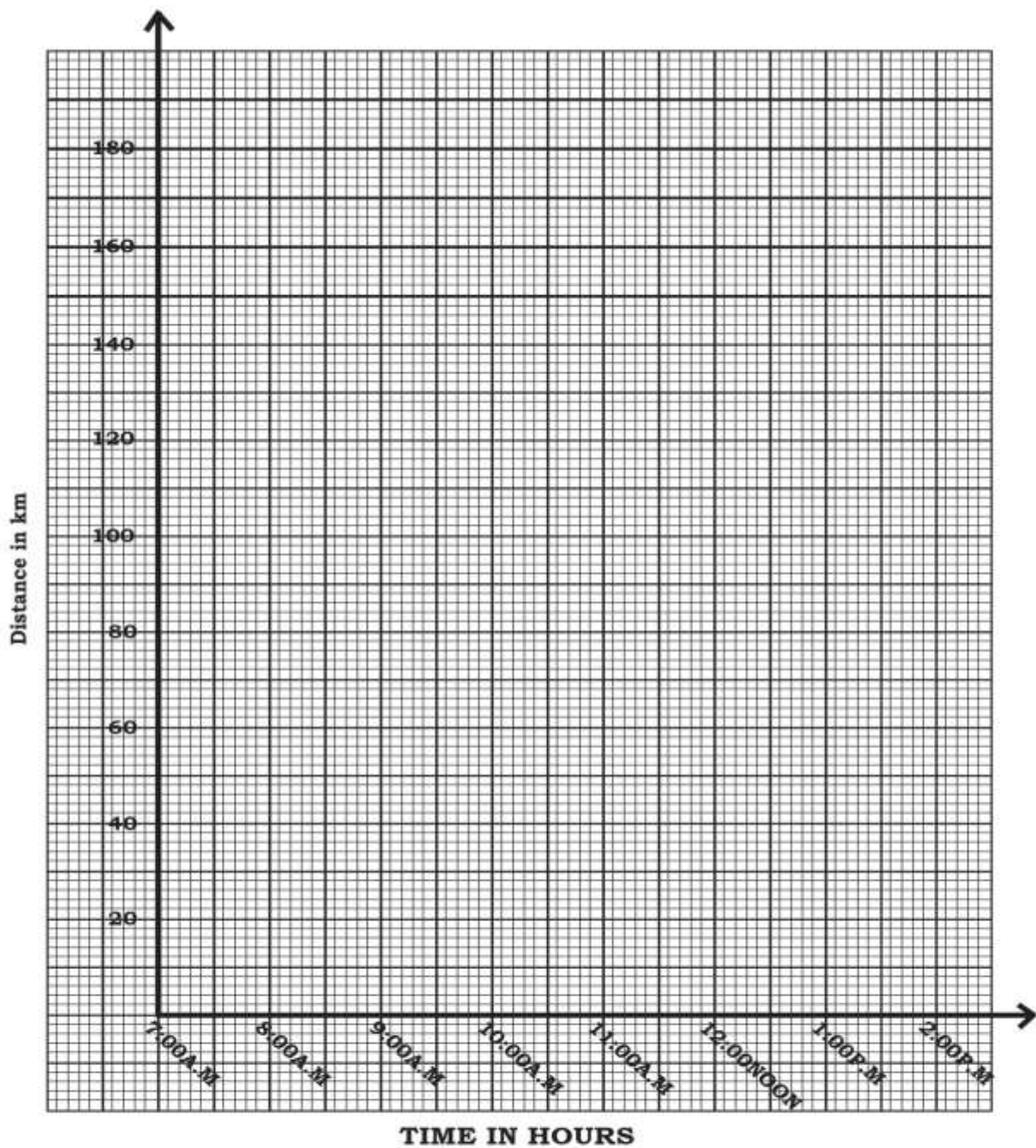
b) Measure diagonal AC = \_\_\_\_\_cm

**(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  $1\frac{1}{2}$  hours. He later continued to town using a speed of 32km/hr for  $2\frac{1}{2}$  hours.

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

**(3marks)**



b) Calculate the average speed for the whole journey.

*(2marks)*