



DIVINE EDUCATION CENTRE

SPECIAL PLE EXAMINATION ITEM  $\frac{6}{6}$

2024

MATHEMATICS

*Time allowed: 2 hours 30 minutes*

Random No.						Personal No.		

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

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

**District ID No.**

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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 **16 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.

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

1- Workout:

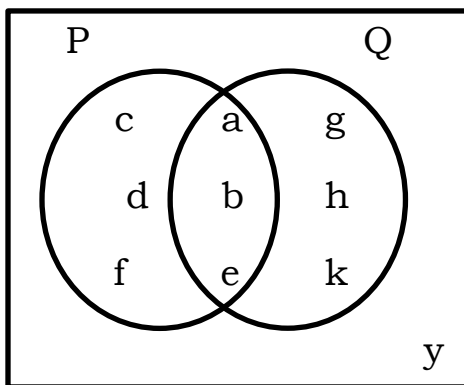
$$\begin{array}{r} 54 \\ - 13 \\ \hline \end{array}$$

2- Write 24,099 in words.

.....

.....

3- Use the venn diagram below to find  $n(P \cap Q)$ <sup>1</sup>



4- Find the range of the following integers;

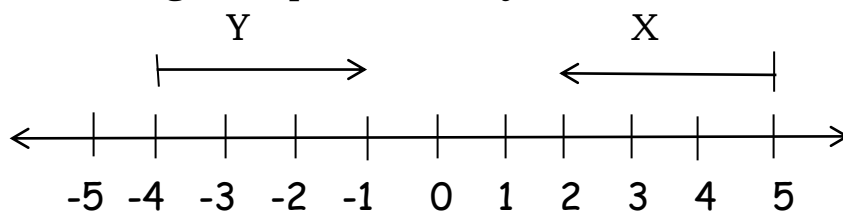
3, 0, -1, -4, and 2

5- Workout:  $3 \div 4(\text{mod } 7)$  using a dial



6- Simplify:  $7n - (3n-5)$

7- Write the integers represented by the arrows below.



Y = \_\_\_\_\_

X = \_\_\_\_\_

8- Given that  $n = 7$ , find the value of  $n \frac{(n + 1)}{2}$

9- Solve the inequality ;  $9 - 3d > 3$

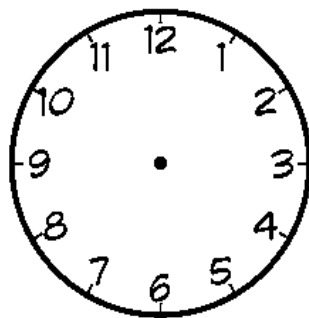
10- Workout:  $\frac{3}{4} \div 1\frac{1}{4}$



11- Work out:  $213_{\text{four}} \times 12_{\text{four}}$

12- Write 0.040 in standard form

13- Show the time “twenty minutes to five” on the clock face below



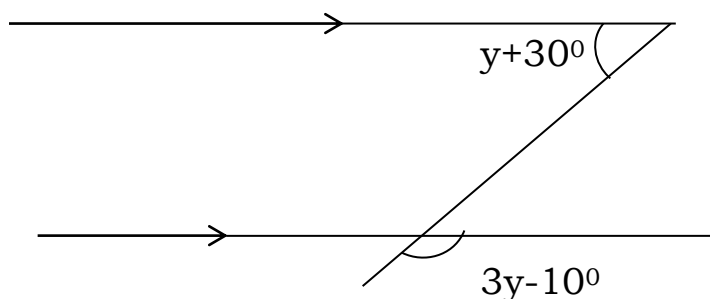
14- Find the next number in the sequence:

72, 47, 31, 22, 18, \_\_\_\_\_

15- The price of an article reduced by  $7\frac{1}{2}\%$  to sh.18,500. Find the original price of the article.



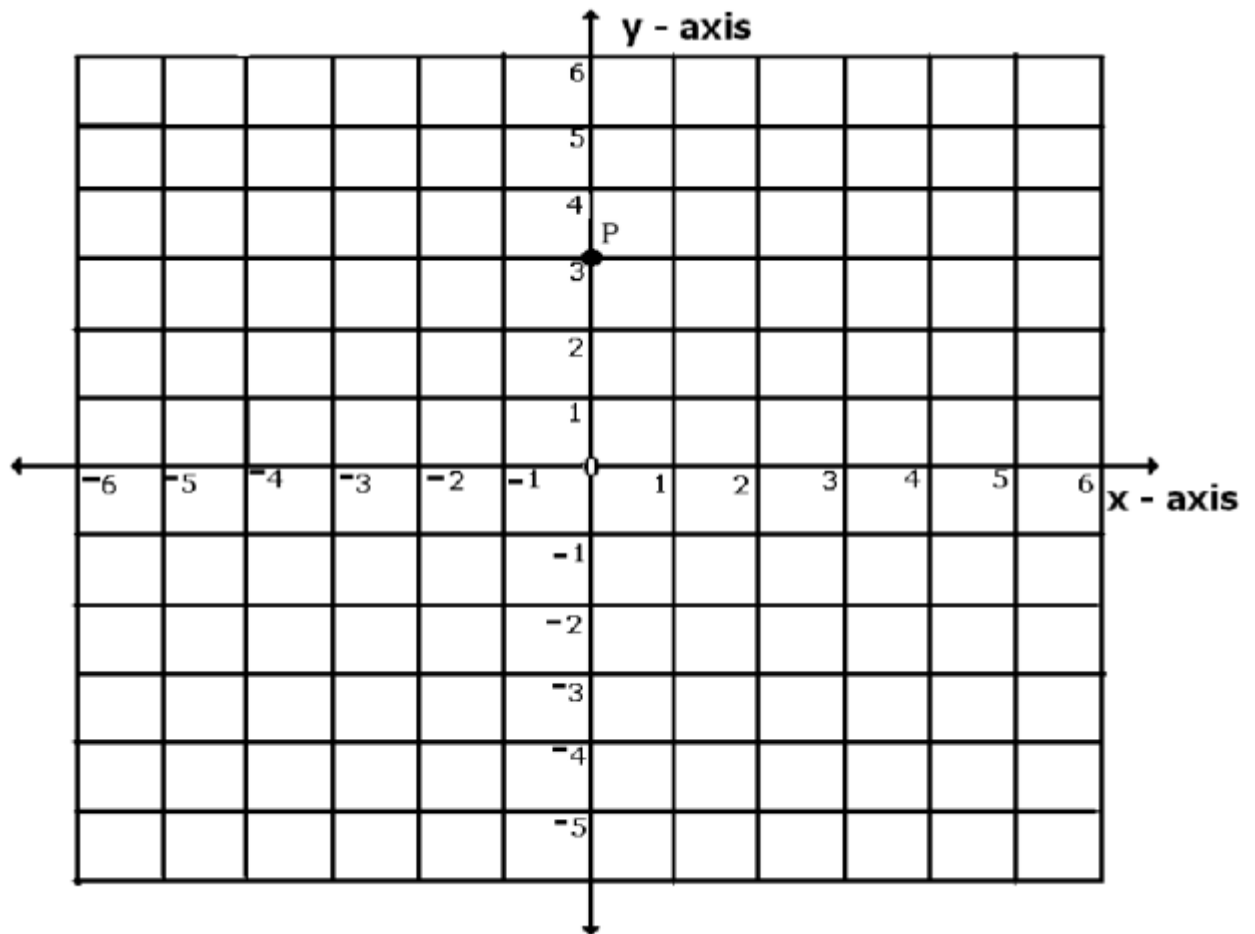
16- Find the value of  $y$  in degrees in the figure below.



17- David fenced his rectangular garden of length 28 metres and width 12 metres using poles round it. He placed each pole at intervals of 4 metres apart. Calculate the total number of poles he used to fence the garden.

18- A factory packs 72 plates in each box. How many boxes of the same size are needed to pack 504 plates?

19- Study the coordinate graph below and use it to answer the questions that follow.



(a) Write the coordinates of point P

(b) Plot the point Q(-2, -3) on the coordinate graph.

20- A welder made a circular flame from a metallic bar of length 94.2centimetres. He places another bar across so that it touches both sides of the flame through the centre. Find the length of the bar placed across the flame. (Use;  $\pi$  as 3.14)



## SECTION B (60MARKS)

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

Marks for each question are indicated in brackets.

21- Given the cards 

4
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7
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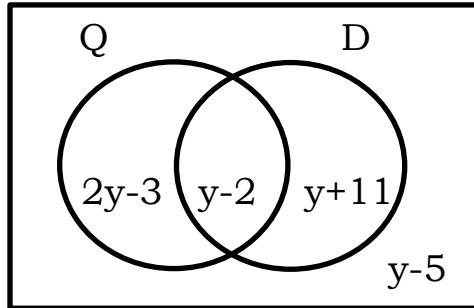
5
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2
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Find the difference of the value of 2 and 5 in the smallest 4-digit numeral formed using all the above cards. **(04marks)**



22- In a class, pupils participated in quiz(Q) and debating (D) as shown in the venn diagram below. Study and use it to answer the questions that follow.



(a) If 6 more pupils participated in debating only than quiz only, find

(i) The value of  $y$  **(02marks)**

(ii) The total number of pupils who were in the class. **(02marks)**

(b) Find the probability that a pupil picked at random participated in debating. **(02marks)**



23- The table below shows the different denominations Lydia had before shopping. Study and use the information to answer the questions that follow.

denomination	number of notes	amount
sh. 10,000	_____	sh.50,000
sh.50,000	2	sh.100,000
sh._____	4	sh.80,000
<b>TOTAL AMOUNT</b>		<b>sh._____</b>

(a) Complete the table above.

**(03marks)**

(b) If she used 80% of the total amount for shopping, how much did she remain with?

**(03marks)**

24- A business man bought 7 boxes of bars of soap each containing 30 bars at sh.150,000 per box. He then sold 150 bars at sh. 7,000 each and the rest at sh.7,500 each. Calculate the profit he made.

**(06marks)**



25- Different schools participated in a quiz competition and scored the points as shown in the table below.

points	15	10	5	20
schools	2	h	1	4

If the average points scored was 14.5, how many schools participated in the quiz competition?

**(04marks)**

26- A car got a mechanical problem after covering 20% of the whole journey.

(a) If the remaining journey was 160km, how long was the journey before the mechanical problem? **(02marks)**

(b) If the car needed 24 litres to complete the remaining journey, calculate the amount of money spent on buying fuel for the whole journey if the cost of each litre was sh.4,800 **(03marks)**



27- Two towns R and T are a distance apart. A taxi moved from town R to town T at an average speed of 72km/h while a bus moved from T to R at an average speed of 60km/h. The two vehicles met after 2 hours and 20minutes.

How far is town T from town R?

**(05marks)**

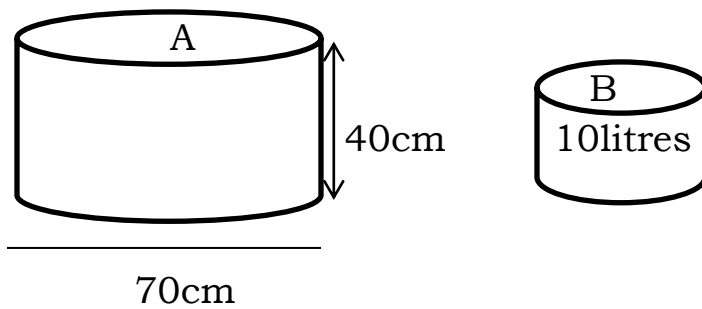
28- Odong deposited money in a bank which offers a simple interest rate of  $6\frac{1}{2}\%$  per month. After 6months, his account had an amount of sh.417,000.

Calculate the money he deposited in the bank.

**(05marks)**



29- A boy filled water in tank A using small containers of size B



(a) How many full small containers of size B did he use to fill container A?

**(04 marks)**

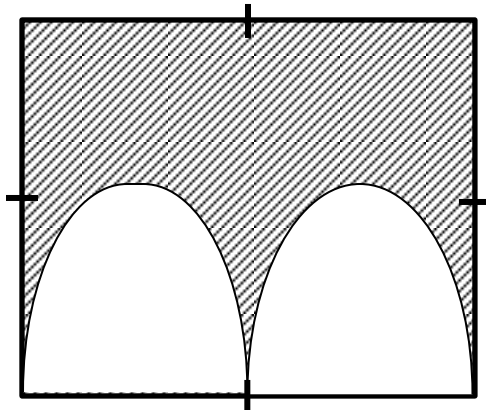
(b) If container A had a remaining part to be filled, how much water in litres was needed to fill container A?

**(02marks)**

- 30- During an interview a teacher awarded 5 marks for every correct answer and deducted 2 marks for every wrong answer. The interview had 20 questions. If Martha scored 58marks, how many questions did she get correct?  
**(04marks)**



- 31- The figure below is of a square room. The unshaded part was covered with two semi-circular mats of same size as shown below. If the area of the room is 784 square metres. Calculate the area of the room not covered with the mats?  
**(04marks)**



32- A school is 60km south of the hospital. The market is 70km on a bearing of  $120^\circ$  from the school and the police station is 50km north of the market.

Using a scale of 1cm to represent 10km, draw an accurate diagram to show the four places. **(05marks)**



**END**

