



# BETTER EDUCATIONAL CONSULTANCY

## PRE-PRIMARY LEAVING EXAMINATION

SET THREE, 2022

MATHEMATICS

*Time Allowed: 2 hours 30 minutes*

Index No.

Random No.						Personal No.		

Candidate's Name: .....

Candidate's Signature: .....

School Random No. ....

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.
3. Answer **all** questions. **All** answers to both sections **A** and **B** must be written in the spaces provided.
4. All answers **must** be written using a **blue** or **black** ball point pen or ink. Any work written in pencil 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**.
6. Do not fill anything in the table indicated: **"for examiner's use only"** and boxes inside the question paper.

### FOR EXAMINER'S USE ONLY

Qn. No	MARK	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. Multiply: 
$$\begin{array}{r} 41 \\ \times 2 \\ \hline \end{array}$$

2. Write in numerals: "Twenty seven thousand seventeen"

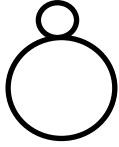
3. Simplify:  $-8 - -5$

4. Find the missing number in the sequence below.  
\_\_\_\_\_, 20, 16, 13, 11, 10

5. Given that  $p=5$ ,  $q=0$  and  $r=3$ . Find the value of  $pq + pr$ .

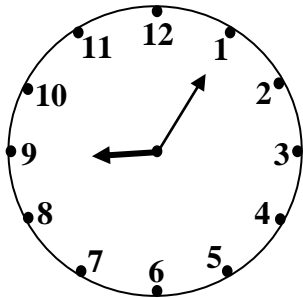


6. How many lines of folding symmetry has the figure below?



7. With the help of a ruler, a pencil and a pair of compasses only, construct an angle of  $30^\circ$  in the space provided below.

8. A forty minute lesson ended at the morning time shown on the clock face below.



At what time did the lesson end?

9. Justine exchanged US\$550 for Ug sh. 2,117,500. Workout the exchange rate.

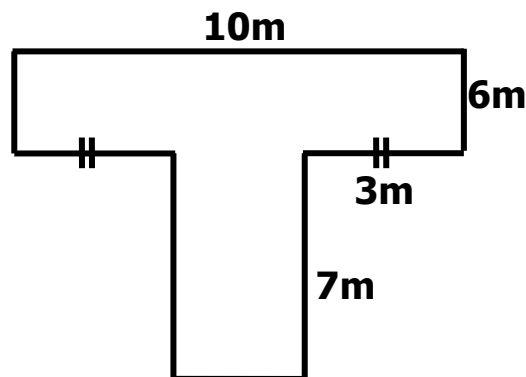
10. Given that:  $A = \{\text{all square numbers between 1 and 25}\}$   $B = \{\text{all factors of 12}\}$

Find  $n(A-B)$



11. In a class of 120 pupils, 0.45 of them are boys. How many girls are in the class?

12. The figure below shows a flower garden. Use the information ,given to work out the distance round the garden.



13. The supplementary angle of  $(3p-25)^\circ$  is  $2p^\circ$ . Calculate the value of P in degrees.

14. Shaidha withdrew 100 ten thousand shillings notes numbered consecutively up to AP534300. Find the registration number of the first note.

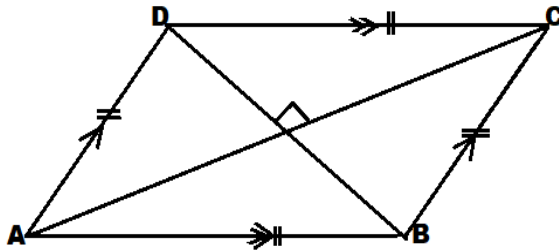
15. Given that  $2^t \times 3^2 = 144$ . Find the value of  $t$ .



16. The average weight of 4 animals; a cow, a bull, a bullock and a heifer is 120kg. a cow weighs 100kg and a bull weighs 130kg. calculate the weight of the heifer if a bullock is as heavy as a heifer.

17. Find the size of each exterior angle of a regular nonagon

18. The figure below shows a rhombus where  $AB = 20\text{dm}$  and diagonal  $AC = 32\text{dm}$ . Calculate the length of diagonal  $BD$ .

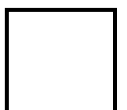


19. Workout:  $\frac{5}{6} - \frac{3}{4}$

20. Lorna counted the number of passengers carried by a boda boda cyclist on a certain day as follow;



If each passenger paid sh. 2000 for the service, how much money did the cyclist collect that day?



**Section B: 60 MARKS**

21. The digits 3, 0 and 5 are used to form a three-digit numeral by using each digit once.

a) Write down all the numerals formed.

(4 marks)

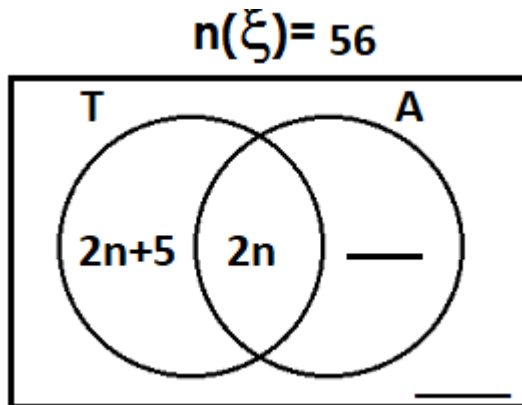
b) What should be added to the smallest numeral to get the largest numeral formed.

(1 mark)

22. A Primary seven class of 56 pupils voted for Tom (T) and Alice (A) as follows:

$(2n+5)$  pupils voted Tom only,  $(3n-15)$  pupils voted Alice only and  $2n$  pupils voted for both Tom and Alice while the number of pupils who did not vote for any of the two candidates is twice the number of those who voted for both candidates.

a) Complete the Venn diagram below.

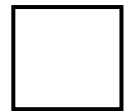


(2 marks)

b) Find the value of n.

(2 marks)

c) How many pupils voted only one candidate?



(1 mark)

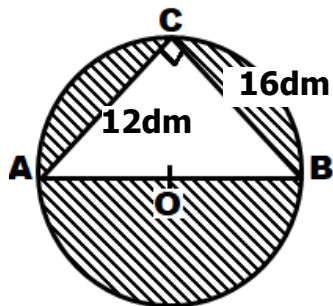
23. A market vendor bought 30 apples at sh. 1500 each. If 5 apples got spoilt and she sold the remaining apples making a profit of sh. 5000. At what price did she sell each apple?

(5 marks)

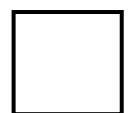
24. The figure below shows a triangle inside a circle. Study it carefully and answer questions that follow.

a) Calculate the area of the triangle ABC.

(2 marks)



b) Work out the area of the shaded part. ( $\pi = 3.14$ ).



(3 marks)



25. The sum of 3 consecutive even numbers is 48. If the largest number is K.  
a) Find the numbers.

(3 marks)

b) Express the smallest number in standard form.

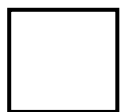
(2 marks)

26. There are 2700 people in a village. 60% of them are males and  $\frac{3}{5}$  of the females are girls.

a) Find the number of males in the village.

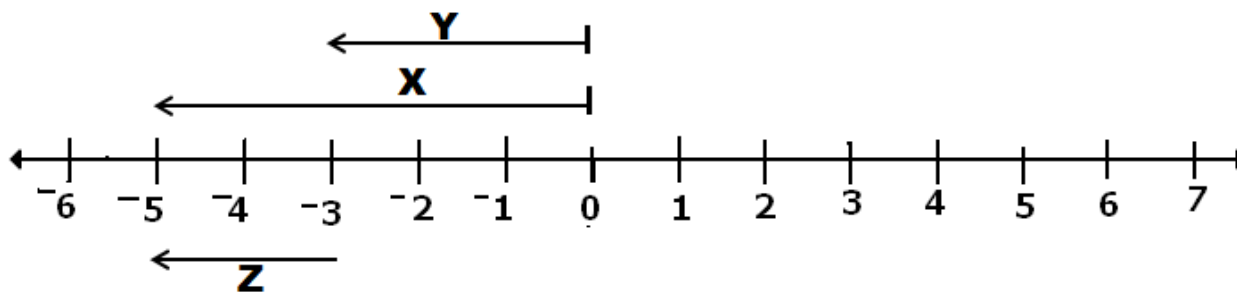
(2 marks)

b) Work out the ratio of girls to males in the village.



(3 marks)

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



a) Write down the integers represented by the arrow.

X \_\_\_\_\_

Y \_\_\_\_\_

Z \_\_\_\_\_

(3 marks)

b) Write down the mathematical statement represented on the number line.

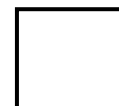
(1 mark)

28. a) With the help of a ruler, a pencil and a pair of compasses only, construct a triangle PQR where  $PQ = QR = PR = 6.0\text{cm}$ .

(4 marks)

b) Bisect angles PQR and QPR and let the bisectors meet at point O. Measure angle POQ

(2 marks)



29 A rectangular sheet of metal below is to be folded to form a hollow cylinder.



20cm

44cm

a) Workout the area of the rectangular ssheet.

(2 marks)

b) Calculate the volume of the hollow cylinder.

(3 marks)

30. When marking a test, a teacher awarded 4 marks for every correct answer and deducted 2 marks for every wrong answer. The test contained 25 questions.

a) Peter got 18 correct answers. How many marks did he get?

(2 marks)

b) Amanda scored 70 marks. How many wrong answers did she get?

(3 marks)



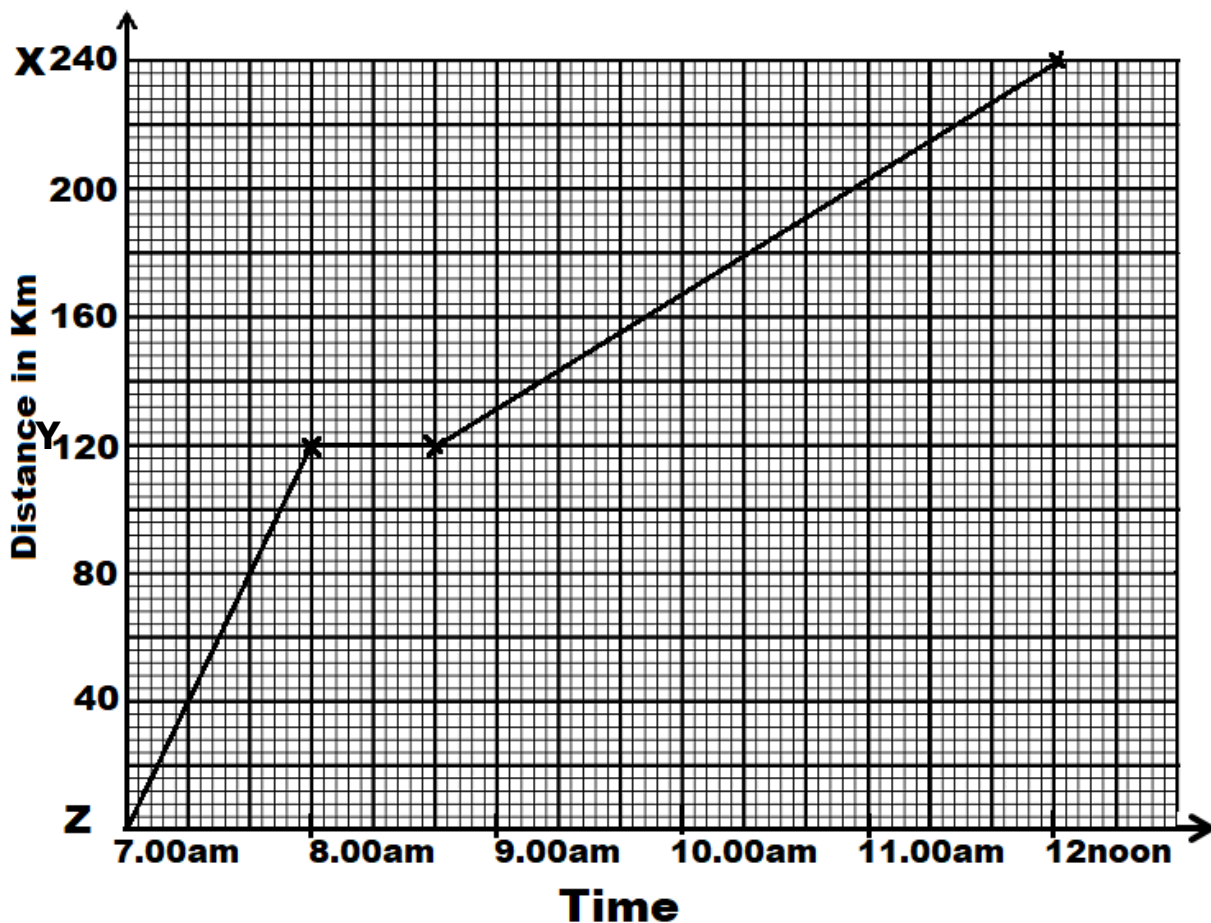
31. a) Musa was facing west. He then turned clockwise through an angle of  $180^\circ$ . Find his new direction.

(2 marks)

b) The bearing of the mango tree from the guava tree is  $083^\circ$ . Work out the bearing of the guava tree from the mango tree.

(2 marks)

32. The graph below shows a motorist's journey from village Z to village X via village Y.



a) At what time did the motorist arrive at village Y?

(1 mark)

b) For how long did the motorist rest at village Y

(1 mark)

c) How far is village Z from village Y?

(2 marks)

d) Calculate the average speed of the motorist for the whole journey.

(2 marks)

