



VICTORY STEP EDUCATION SERVICES  
PRIMARY SIX BOT EXAMINATION

2023

MATHEMATICS

*Time Allowed: 2 hours 15 minutes*

Random No:						Personal No:		

Candidate's Name: .....

Candidate's signature: .....

District ID No: 

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School Name: .....

Read the following instructions carefully :

1. Do not forget to write your **school** or **district** on the 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. Unnecessary changes in your work and handwriting that cannot be read easily may lead to loss of marks.
6. Do not fill anything in the table indicated  
**"FOR EXAMINER'S USE ONLY"**

FOR EXAMINER'S 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

1. Add:  $9 + 11$

2. Write 145 in Roman numerals

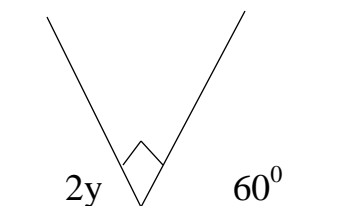
3. Work out  $0.3 \times 0.4$

4. Simplify  $6r + 12p - r + 3p$

5. Prime factorize 60 and write your answer in set notation form.

6. Workout:  $4 - \sqrt{10}$

7. Find the value of  $y$



8. Find the mean of 5, 9, 6 and 4

9. Divide:  $\frac{3}{4} \div \frac{1}{2}$

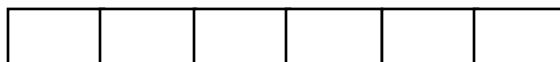
10. Construct an angle of  $60^\circ$  in the space below.

11. Express 5kg to grams

12. Use distributive property to work out  
 $(5 \times 17) + (83 \times 5)$

13. Work out the square of 9

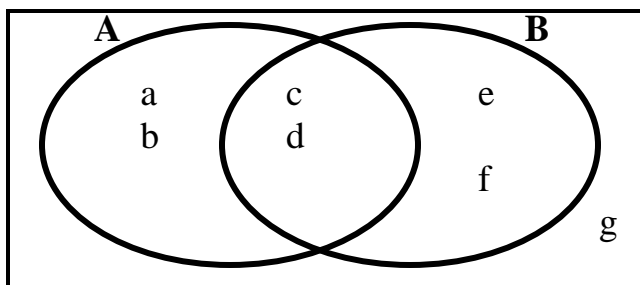
14. Shade  $\frac{2}{3}$  of the diagram.



15. Write the next two numbers in  
the sequence:  
1, 4, 9, 16, 25, \_\_\_\_\_, \_\_\_\_\_

16. Musoke will visit her aunt next week. What  
is the probability that he will visit on a day  
that starts with letter T?

17. The Venn diagram below shows elements of set A and B



Find  $n(A)'$

18. Find the GCF of 6 and 9

19. If  represents 15 balls. How many balls are represented by     ?

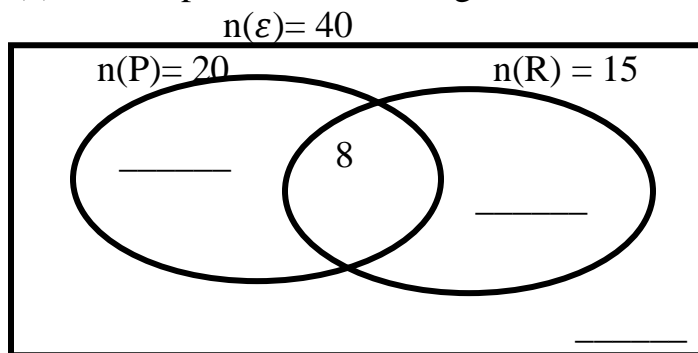
20. Write  $212_{\text{three}}$  in denary base

### SECTION B

21. In a class of 40 pupils, 20 pupils like posho (P), 15 like rice (R), 8 pupils like both posho and rice while x pupils do not like any of the two meals.

(a) Complete the Venn diagram below.

(3 marks)



(b) Find the value of X

(2 marks)

22. Given the number 4876

(a) Find the sum of the values of 4 and 7

(3 marks)

(b) Write of 4876 in standard form.

(2 marks)

23. Arrange  $\frac{5}{6}, \frac{7}{12}$  and  $\frac{4}{5}$  in ascending order.

( 4 marks)

24. Donso went to the supermarket and bought the following items.

*3 kg of meat at sh. 10,000 a kg*

*2 bars of soap at sh. 7,000 a bar*

*3 litres of milk at sh. 1000 per litre*

*$\frac{1}{2}$  kg of sugar at sh. 5000 a kg*

(a) Calculate his total expenditure.

(4 marks)

(b) Find her change if she went with a fifty thousand shilling note.

( 1 mark)

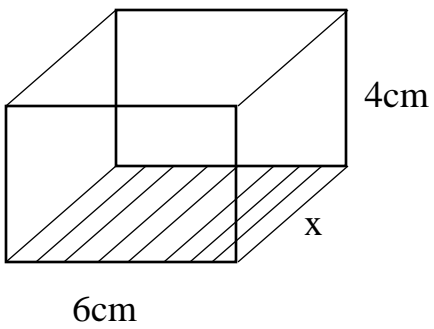
25. (a) If  $r = 4$ ,  $p = 10$  and  $c = 5$ . Find the value of  $\frac{r p}{c}$

( 2 marks)

(b) Alice is 10 years older than Judith. If their total age is 40 years, how old is Judith?

(3 marks)

26. Study the figure below and use it to answer the questions that follow.



(a) How many faces does the figure have? (1 mark)

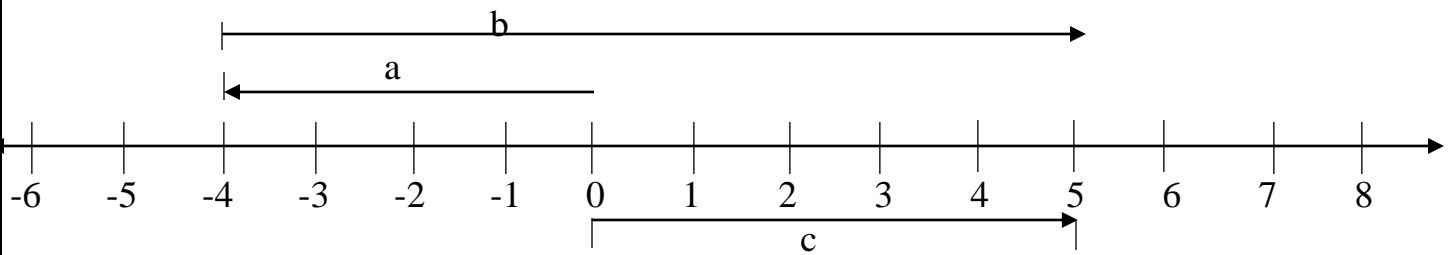
(b) If the area of the shaded part is  $30\text{cm}^2$ . Find the value of x (2 marks)

(c) Calculate the volume of the figure above. (2 marks)

27. (a) The sum of three consecutive odd numbers is 45. Find the numbers. (3 marks)

(b) What is the sum of all prime numbers less than 10? (2 marks)

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



(a) Write the integers represented by letters. (1 mark each)

(i) a (ii) b (iii) c

(b) Write the Mathematical sentence for the above number line. (1 mark)

29. If  $P = \{ 2_1, 3_1, 3_2, 5_1 \}$   $Q = \{ 2_1, 2_2, 3_1, 7_2 \}$

(a) Find the value of:

(i) P (2marks) (ii) Q ( 2marks)

(b) Calculate the LCM of P and Q (2 marks)

(i) L.C.M



30. (a) Construct a square ABCD of side 5cm (4 marks)

(b) Work out its perimeter. (1 mark)

31. Two bells at St. John's Primary School are sounded at an interval of 30 minutes and 40 minutes for lower and upper Primary respectively.

(a) After how many hours will the two bells be sounded together again? ( 4 marks)

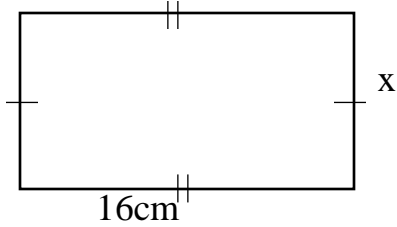
(b) If they were first sounded at 9:00a.m., when will they be sounded together again?  
( 1mark)

32. Study the diagram below and use it to answer the questions that follow.

$$2x+6\text{cm}$$

(a) Find the value of  $x$ .

(2 marks)



(a) Calculate the area of the figure.

(2 marks)

(c) Work out its perimeter.

(2marks)