DIVINE EDUCATION CENTRE

PRIMARY SEVEN EXAMINATIONS 2022

MATHEMATICS SET 4

Time allowed: 2hours 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** .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		

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Turn Over

SECTION A: 40 MARKS

*Answer **all** questions in this section*

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

1. Add: 4 0 2 + 1 4 3

2. Simplify: $^{+}6 - {}^{+}8$

3. In a class, the ratio of girls to boys is 5:6. If there are 20 girls, how many pupils are in the class?

4. Divide 2727 by 3.

5. If x and $2x + 30^{o}$ are angles on a straight line. Find the value of x in degrees.

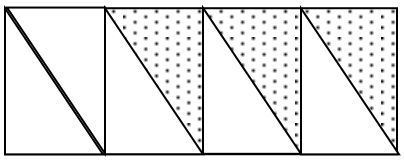
6. Round off 4783 to the nearest tens.

7. Workout $\frac{2}{9} + \frac{4}{9}$ to its simplest form.

8. Write 24 as a product of its prime factors.

9. In a basket, 4 rotten eggs are mixed with 5 good eggs. If an egg is picked at random from the basket, what is the probability of picking a good egg?

10. Write down the fraction of the unshaded part of the drawing below.

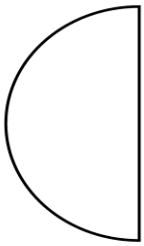


11. Using a pencil, ruler and protractor, draw an angle of $45^{\mathbf{o}}$.

12. Write in figures: “Forty five thousand, five”.

13. Simplify: 4.0 ÷ 0,5 + 5.

14. How many lines of folding symmetry does the figure below have?



15. Find the sum of the next two numbers in the sequence.
2, 3, 5, 7, ____, _____

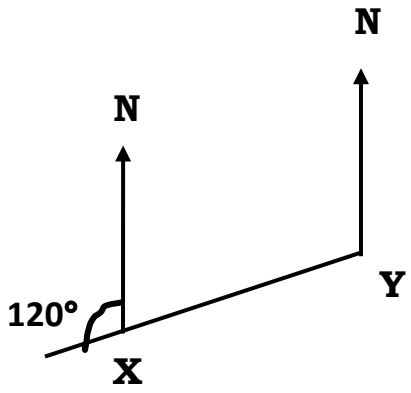
16. Work out (5 x 14) + (5 x 6) using distributive property.

17. A mathematics test lasting $\mathbf{1\frac{1}{2}}$ hours ended at 11:00a.m. At what time did the test start?

18. The mean age of 4 girls is 15 years, the total age of three girls is 50 years. Find the age of the fourth girl.

19. Solve for m. $\frac{3}{5}(2m - 3) = 3$.

20. In the figure below, find the bearing of **x** from **y**.



SECTION B: 60 MARKS

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

Marks for each question are indicated in bracket.

21. a) Workout: $\frac{1.45 \times 0.66}{1.1 \times 1.5}$ (3marks)

b) $1\frac{2}{5} \times 1\frac{1}{2} \div 3\frac{1}{2}$ (3marks)

22. a) What is the place value of 3 in the number 4 5 3 0 1? (1mark)

b) Simplify: $n^3 \times n^5 \div (n^2 \times n^4)$ (2marks)

c) Expand 4 3 7 using values. (2marks)

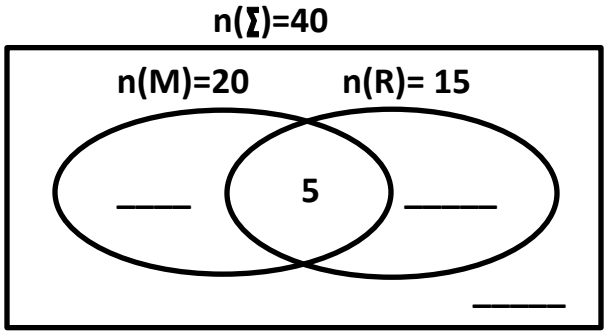
23. The sum of interior angles of a regular polygon is 720^{0}.

a) How many sides has a polygon? (3marks)

b) What is the size of each exterior angle? (2marks)

24. In a class of 40 pupils, 20 enjoy Matooke (M), 15 enjoy Rice (R). 5 enjoy both Matooke and Rice yet 2p enjoy neither of the two.

a) Complete the venn diagram below (3marks)



b) Find the value of P. (2marks)

25. The average score of 7, 9, 7, 4 and m is 6.

a) Find the value of M (2marks)

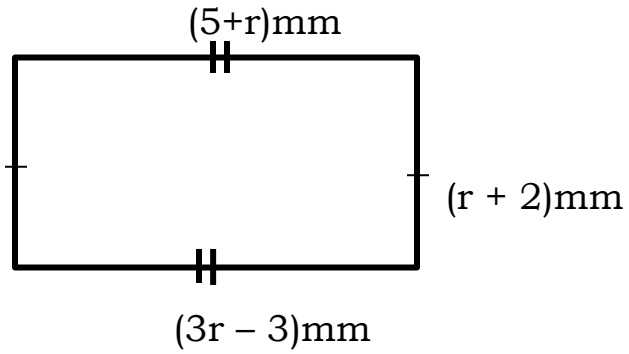
b) What is their Range (1mark)

c) Find the sum of their median and mode. (2marks)

26. Using as pair of compasses, ruler and pencil only, construct triangle KPC where $\overline{KP}$ =6cm, angle KPC = 60^{o}, angle CKP = 30^{o} and drop a perpendicular bisector from C to meet KP at n. (5marks)

b)Measure $\overline{cn}$. (1mark)

27. Below is a rectangle. Study it and answer the questions that follow.



a) Find the value of r. (2marks)

b) Calculate its perimeter (3marks)

28. Solve for m:

a) $\frac{3m + 1}{4} = \frac{m+2}{2}$ (3marks)

b) $\frac{1}{5}m^2 = 20$ (2marks)

29. The sum of 3 consecutive odd numbers is 45.

a) Find the numbers (3marks)

b) If set X = (all square numbers between 3 and 20) Find n(X) (2marks)

30. Judith went to the supermarket with sh. 45000 and bought the following items.

- 3kg of rice at sh. 2500 per kg
- 2 loaves of bread at sh. 3800 per loaf
- 1 ½ litres of cooking oil at sh. 2000 each litre
- 500 gm of blue band for sh. 6000 a kg

a) What was his total expenditure? (5marks)

c) If she was given a discount of shs. 1000, how much was her change? (1mark)

31. a) Express 20m/sec as km/hr. (2marks)

b) A cyclist covered a distance of 60km in 30 minutes. Express his speed in km/hr. (2marks)

32. Nakato is twice as old as her brother John. If their total age is 42 years.

a)How old is John? (2marks)

b) Find the difference in their ages (1mark)

END