DREAM AFRICA SCHOOLS

SEETA-EXAMINATIONS COMMITTEE

SPECIAL SET FOUR 2022

MATHEMATICS

Time Allowed: 2 hours 30 minutes

Index No. : | | | | | | | | | |

Candidate's Name : .....

Candidate's Signature : .....

School Name : .....

District Name : .....

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.

Read the following instructions carefully:

1. This paper has **two** sections: **A** and **B**.
2. All the working for both sections **A** and **B** must be shown in the spaces provided.
3. All working must be done using a blue or black ball-point pen or fountain pen. Any work done in pencil other than graphs, pictures and diagrams will **not** be marked.
4. **No calculators** are allowed in the examination room.
5. Unnecessary changes of work may lead to **loss** of marks.
6. Any handwriting that cannot easily be read may lead to **loss of marks.**
7. Do **not** fill anything in the boxes indicated: **"For Examiners' Use Only"**

FOR EXAMINERS' USE ONLY		
Qn. No.		
1 – 5		
6 – 10		
11 – 15		
16 – 20		
21 – 22		
23 – 24		
25 – 26		
27 – 28		
29 – 30		
31 – 32		

SECTION A (40marks)

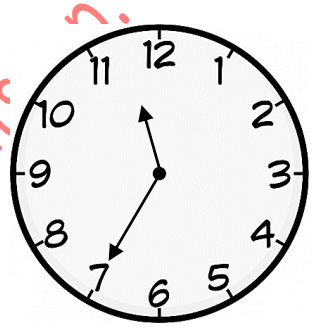
1. Add: 34 + 53

2. Given set R= {1, 2, 3, 4, 5, 6, 7, 8, 9} W = {all square numbers in set R}. Find n(W)'

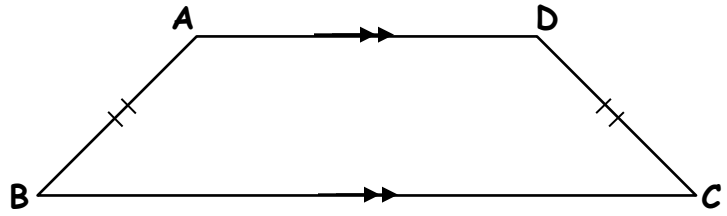
3. Simplify: $\frac{3.6-0.6}{0.5}$

4. Find the next number in the sequence 23, 19, 17, 13, 11, _____

5. Express the morning time shown on the clock face below in 24hr clock system.

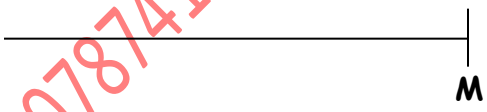


6. How many lines of folding symmetry has the figure below.



7. Given that b=4, a=5. Find the value of $b(a - b)^2$

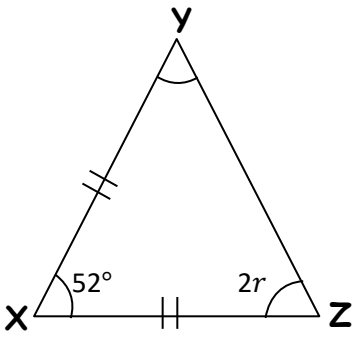
8. Using a ruler, pencil and a pair of compasses only construct an angle of 30°at point M.



9. Workout for x below: 3 – 4 = _ (finite 5)

10. Solve: $8p = 3p + 45$

11. Workout the value of r in the figure below:



12. Simplify: $2^{3p} = 64$.

13. Factorise completely $12x^3y - 8y^2x$

14. Round off 49.97 to the nearest tenths.

15. How many $300ml$ are in 12 litres?

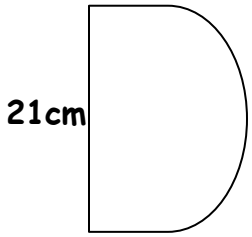
16. Simplify: $\frac{3^4 \times 3}{3^5}$

17. The cost of 1 US dollar is Ug.sh.1250. How many dollars would Tendo buy with Ug.sh. 25,000?

18. Solve: $2 + \frac{x}{12} = 6$

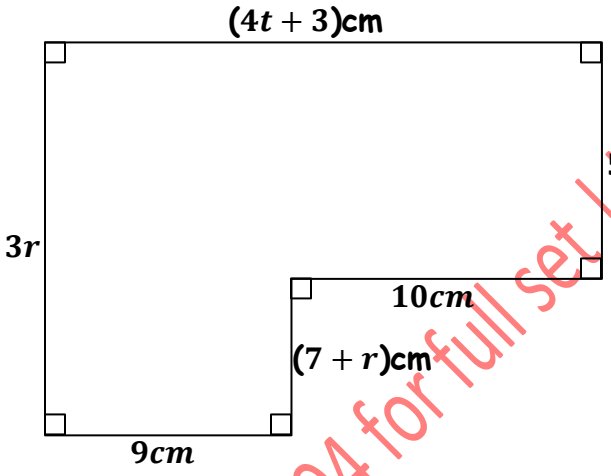
19. Given that set M has 4 subsets, find the number of elements it has.

20. Find the perimeter of the figure below:



SECTION B(60marks)

21. Use the figure below to answer questions that follow:



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

(b) Calculate the value of t. **(1mark)**

(c)Find its area. (3marks)

22. Obisa has a radio which uses 18-volt batteries. Each battery has 1.5 volts.

(a)How many batteries does he need to use his radio? (3marks)

(b) Each pair of batteries costs sh. 1500. How much does he need for his radio? (2marks)

23. Azizi's poultry farm produces eggs equivalent to the number expanded below per week.

$(8 \times 10^2) + (2 \times 10^1) + (5 \times 10^0)$

(a)How many eggs does he produce per week? (2marks)

(b) If he sells each tray for sh. 7000. How much money does he earn per week? $(2marks)$

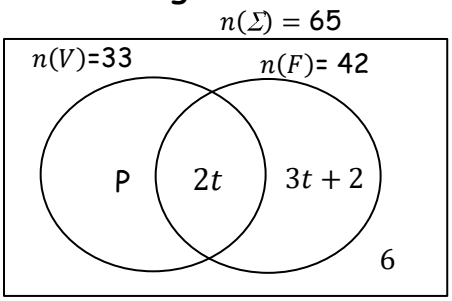
24. (a) Simplify: $\frac{3.6\times2.4}{4.8\times1.2}$ $(3marks)$

(b) Express $2\frac{1}{8}$ as a decimal fraction. $(2marks)$

25. (a) The centre angle of a regular polygon is 120°. Name the polygon $(3marks)$

(b) Calculate the interior angle sum of the polygon. $(2marks)$

26. Use the Venn diagram to answer the questions below.



(a) Find t. **(2*marks*)**

(b) Calculate the value of P. **(2*marks*)**

(c)Workout: $n(V \cup F)^{I}$ **(1*mark*)**

27. (a) Workout: $\frac{2}{3} + \frac{1}{2} + \frac{3}{4}$ **(2*marks*)**

(b) The number of pupils in Pooti Junior School increased by x% form 800 pupils to 960. Find the value of x. **(3marks)**

28. Namuga went with a twenty thousand shillings note and bought the following items:

$2kg$ of sugar at sh. 3800 per kg.

$1\frac{1}{2}$kg of salt at sh.600 per kg.

2 bars of soap for sh.4000.

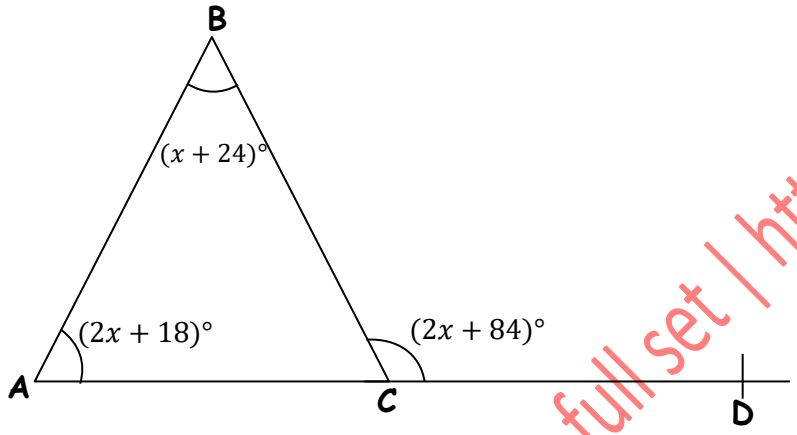
(a)How much did she pay for all the items if she was given a discount of 10%? **(3marks)**

(b) Find his change after paying for all items. **(2marks)**

29. (a) Add: $0.79 + 4 + 13.6$ **(2marks)**

(b) **Multiply:** 479×32 **(2marks)**

30. Use the figure to answer.



(a)Find x. **(3marks)**

(b) Find angle ACB. **(2marks)**

31. (a) The perimeter of a rhombus is 52cm, one of the diagonals is 10cm. Find the length of the other diagonal. **(2marks)**

(b) Calculate its Area. **(3marks)**

32. Town R is 80km west of town P and town T is 60km south of town P.

(a) Draw a sketch to show the three towns. **(1mark)**

(b) A motorist moved from town R to T via town P. Using a scale of 1cm to represent 20km draw an accurate diagram to show his movement. **(3marks)**

(c)Find the direct distance from R to T. **(1mark)**

(d) Find the bearing of T from R. $(1mark)$

END