



KAMPALA CITY EXAMINATIONS BOARD

" The city of success "

2024

MATHEMATICS

Time allowed: 2 hours 30 minutes

EMIS No.						Personal No.		

**CITY
EXAMS**

Candidate's Name:

Candidate's Signature:

District ID No.

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Read the following instructions carefully

1. Do not forget to write your **school** or **district name** on the paper.
2. This paper has two sections: **A** and **B**. Section **A** has **20** questions and section **B** has **12** questions. The paper has **14** printed pages altogether.
3. Answer **all** questions. **All** working for both sections **A** and **B** must be shown 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 other than graphs or **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 read easily may lead to **loss of marks**
7. Do not fill anything in the table indicated:
FOR EXAMINERS USE ONLY and boxes inside the question paper.

**CITY
EXAMS**

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

1. Work out; 22×3 .

2. Write 28,090 in words.

.....
.....

3. Workout $2a - c + a^3c$.

4. Find the median of the numbers below; $-4, -1, -3$ and -2 .

5. Workout; $(0.15 \times 0.5) + (0.5 \times 0.10)$.

6. Without dividing, determine whether 3001 is divisible by 9.

7. Simplify; $b^3 \div b^2$.

8. Convert 5m^2 to cm^2 .

9. Set **A** has 16 subsets. How many elements has set **A**?

10. The lowest common multiple of two numbers is 72 and their greatest common factor is 6. If one of the numbers is 24. Find the next number.

11. Round off 4926 to nearest thousands.

12. The diameter of a bicycle wheel is 70cm. Find the distance it covers in two complete revolutions. (use $\pi = \frac{22}{7}$)

13. Express 0.25 as fraction in it's lowest form.

14. Workout; $42_{\text{five}} \times 21_{\text{five}}$.

15. The bursar at St. Allan Primary School withdrew twenty thousand shilling notes numbered consecutively from AB10213909 to AB10213958. How much money did he withdraw?

16. Express 25m/sec to Km/hr.

17. The base area of rectangle is 24cm^2 . If the length is 8cm, find its width.

18. Today is Wednesday, what day of the week will it be after .
21days?

19. Share 12 mangoes in the ratio of 4:2.

20. Bottles of 300 milliliters (ml) were used to fill a nine litre
Container with water. Find the number of 300ml bottles that were
Used.

SECTION (B) 60MARKS

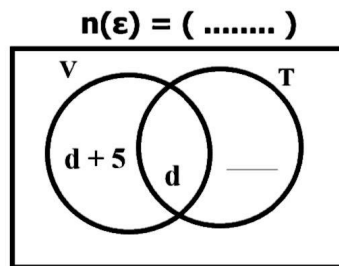
21. Mr. Augustine left his home at 9:00am traveling to town at 20km/hr and reached town at 10:30am. His car got mechanical problem and it took half an hour for repair. He later proceeded with his journey to the market driving at 30km/hr for 1 hour.

a) How far is the home from the town? *(2marks)*

b) If he returned home from the market at an average speed of 10km/hr, find the time taken in his return. *(3marks)*

22. In a class, 31 pupils play tennis (**T**) and $(d + 5)$ play volleyball (**V**) only. **D** pupils play both games while 3 play neither of the games.

a) Complete the Venn diagram. (3marks)



b) If **27** pupils play volleyball altogether. Find the value of **T**. (2marks)

23. a). Simplify; $\frac{2.7 \times 0.54}{1.63 + 0.17}$. (3marks)

c) Change 2.333..... to a rational number. (2marks)

24. a). Solve the equation; $\frac{3}{5}h + 6 = 2 + h$.

(3marks)

b). Solve the inequality; $9 - 2k > k + 3$.

(2marks)

25. Jonathan deposited sh.120,000 which amounted to sh.132,000 for a period of 6 months per annum. Calculate his simple interest rate.

(5marks)

26. Peter spends $\frac{1}{3}$ of his money on food, $\frac{1}{6}$ on medical, $\frac{1}{18}$ On house and bank the rest which is sh.35000.

a).what fraction of his salary does he bank? *(3marks)*

b).How much money does he earn as salary? *(2marks)*

27. The average weight of four girls is 50 kg. When two other girl join the group, the average weight becomes 52 kg. The 6th girl is 8kg heavier than the 5th girl. Find the weight of the 6th girl.

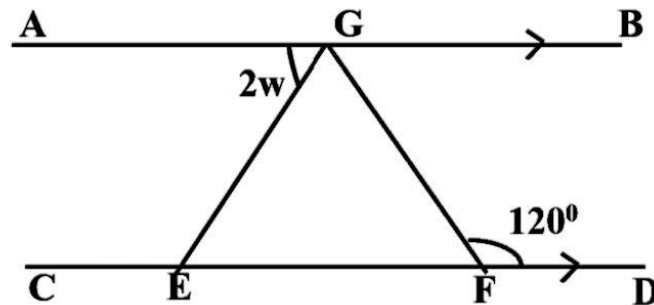
(5marks)

28. Anzo bought a cylindrical tin of radius 7cm and he filled it with Water to level of 924cm^3 and no space was left in the tin.

a) Calculate the height of the tin. (*3marks*)

b) The sum of the lengths of all the edges of cuboid is 48cm. Given that its length is 3cm and its width is 2cm, find the height of the cuboid. (*3marks*)

28. In the figure below, line **AB** is parallel to line **CD**. Angle **GCF** is **120°** and angle **EGF** is **70°** less than angle **GFD**. Study it carefully and use it to answer the questions that following .



- a) Find the value of **w** in degrees. (2marks)
- b) Calculate the size of angle **GEC**. (2marks)
- c) Workout the complement of 65° . (2marks)

29.a). Using a ruler, a pencil and pair of compasses only, construct a regular Hexagon of radius 3cm. *(4marks)*

30.a) Mr. Oketch Patrick is three times as old as his son Kato now. in 5years time, the difference between their ages will be 30 years. How old is his son Kato now?

a) How old will Mr. Oketch Patrick be in 25 years time? *(3marks)*

b)'Uthman Balijuka is 20years old and Ratib is 16years old. After how many years will their age be in the ratio of 3:2 respectively? *(3marks)*

31. The exchange rates in the bank are as follows .

1 USDollar = Ugsh. 3400.

1 British pound Sterling = Ugsh. 4600.

1 Kenya shillings = Ugsh. 35.

a) Change Ugsh. **368,000** to British pound Sterling. (2 marks)

b) If the cost of clothes is **350** USDollars, find the equivalent amount in Kenya shilling. (2 marks)

32.a) Town A is **075°** anticlockwise from town **B**. The distance from town **A** to town **B** is **60km**. Town **C** is **50.5km** North East of town **A**. Draw an accurate diagram to show the three towns. Use scale of (10cm:10km) (3mark)

b) Find the bearing of town A from town C. (2marks)