THE PEARL EDUCATIONAL CONSULT - KAMPALA

TEACHER`S COMPETENCE EXAMINATIONS 2024

MATHEMATICS

SET ONE

Time allowed: 2 hours 30 minutes

Teacher's Name: _____

Teacher's Signature: _____

District Name: _____

DO NOT OPEN THIS BOOKLET UNLESS YOU ARE TOLD TO DO SO

Read and follow these instructions carefully:

1. This paper has **two** sections: **A** and **B**. Section A has **20** questions and section B has **12** questions. The paper has **7** printed pages.
2. Answer all questions. **All** answers to both sections **A** and **B** must be shown in the spaces provided.
3. All answers must be written using a **blue** or **black** ball point pen or ink. Any answer written in pencils other than on 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 easily be read 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.

For examiners use only		
QN. NUMBER	MARKS	EXAMINER'S INITIAL
1-5		
6-10		
11-15		
16-20		
21-22		
23-24		
25-26		
27-28		
29-30		
31-32		
TOTAL		

EMAIL KIRYAJ511@GMAIL.COM THE PEARL UGANDA LIMITED

SECTION A (40 MARKS)

Work out: $48 \div 4$

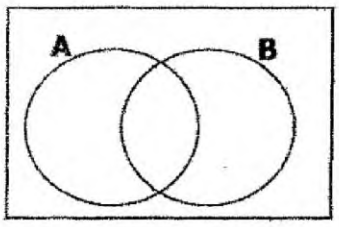
Write **one hundred two thousand fourteen** in a decimal numeral.

Simplify: $^{-}7 - {}^{-}9$

4. Double the next number in the sequence.

   5, 9, 15, 23, 32, 42, _____

5. Shade A complement in the diagram.

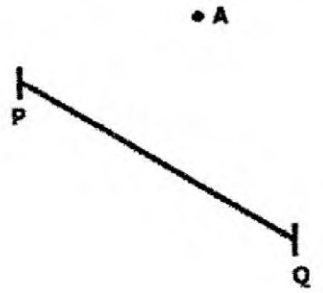


6. **Simplify:** $1\frac{3}{4} \div \frac{1}{2}$

7. **Work out:** $1\ 1\ 0\ 1_{two}$

   $\times\ \ 1\ 1_{two}$

8. Using a ruler, a pencil and a pair of compasses only, drop a **perpendicular** line from point A to meet PQ.



9. Calculate the arithmetic **mean** of p, p + 2, p + 4 and p + 6.

10. Given **a = bc, b = 2** and **c = -3**, evaluate $b(a^2 - c)$

SECTION A (40 MARKS)

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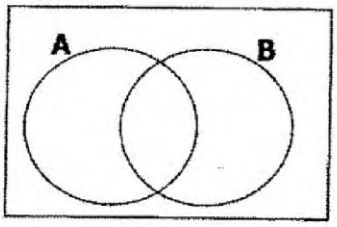

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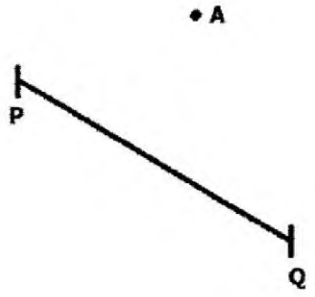


9. Calculate the arithmetic **mean** of p, p + 2, p + 4 and p + 6.

10. Given **a = bc, b = 2** and **c = -3**, evaluate $b(a^2 - c)$

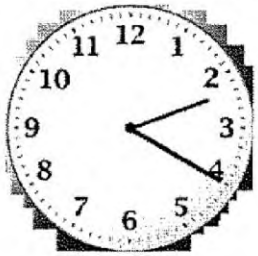
11. Calculate the distance covered by a taxi travelling at **30km/hr** for **45** minutes.

12. Mwekambe has **CXCV** hens. Express his hens in **Hindu-Arabic** numerals.

13. How many hundreds are in the value of **4** in the number **746210**?

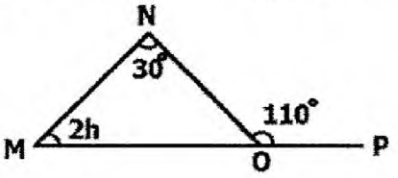
14. How many kilograms are in **650** grams?

15. Express the afternoon time shown on the clock face below in **24** hour clock system.



16. A nurse at Victoria Hospital injected each patient with **3ml** of COVID-19 vaccine. If she used **0.45l** of vaccine. How many patients did she vaccinate?

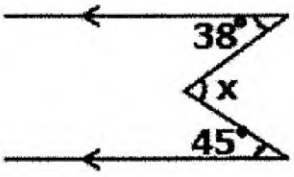
17. Find the size of angle M in the figure below.



18. The cost of **5** cakes is **shs.4,000**. What is the **cost** of **9** similar cakes?

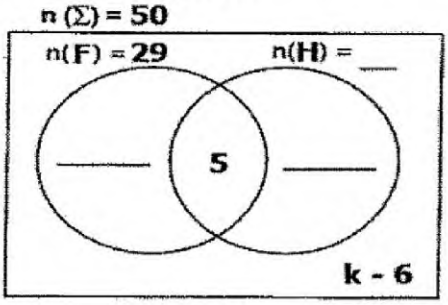
19. Given that P = $\{2_1, 2_2, 3_1, 5_1\}$, find the **value** of **P**.

20. In the figure below find the **value** of **x**.



SECTION B (60 MARKS)

21. In a class of **50** boys, **29** play football **(F)**, **2k** play hockey **(H)** but not football, **5** play both football and hockey while **(k – 6)** play none of the two game.
    a) Use the above information to complete the Venn diagram. (3mks)



    b) Find the **value** of **k**. (2mks)

    c) Find the number of boys who play hockey. (1mk)

22. Manjaga drove her car from Soroti to Kampala at a speed of **70km/hr** for **3** hours. She rested for an hour at Kampala before driving back to Soroti at an average speed of **105km/hr**. Calculate her **average** speed for the whole journey. (4mks)

23. Biikyikami used her salary as follows **30%** on transport, **60%** of the remaining amount on food and saved **shs.840,000**.
    a) Find the **percentage** of her salary that she saved. (2mks)

    b) Find her salary. (2mks)

c) How much did she spend on food? (1mk)

24. a) With the help of a ruler, a sharp pencil and a pair of compasses only, construct a triangle **AMK** where AM = **7.8cm**, angle M = **135°** and MK = **7cm**. (4mks)

b) Measure **AK**. (1mk)

25. a) The temperature in Kibubura decreased by **14°C** at night from **10°C** during the day. What was the **temperature** at night? (2mks)

b) A teacher awards **4** marks for every correct answer and deducts **2** marks for every wrong answer given. If a pupil gave **12** correct answers in a test containing **15** questions, how many **marks** does he get? (2mks)

26. **The table below shows the rates at which different currencies are bought and sold.**

CURRENCY	US $ (dollars)	K.sh (Kenya shillings)	£ (Pounds)
SELLING (Ush)	3750	30	4650
BUYING (Ush)	3700	28	4500

a) How much in Uganda shillings will Ekabu get if he has **1250** US dollars ($)? (2mks)

b) Peter came to Uganda from Great Britain with **7800** pounds which he exchanged for Kenya shillings (K.sh). How much in Kenya shillings did he receive? (3mks)

27.a) **Solve:** $3(3p - 6) + 2(2p - 4) = 0$ (3mks)

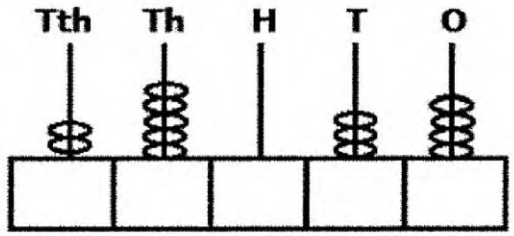
b) Epeduno is **35** years old and his son is **10** years. In how many years time will the son be a half his age? (2mks)

28. A farmer has **110** cows each producing **15** litres of milk per day. **300** litres of milk produced every day are sold at **sh.2800** per litre and the rest of the milk is supplied to the dairy.
    a) How many litres of milk are supplied to the dairy weekly? (3mks)

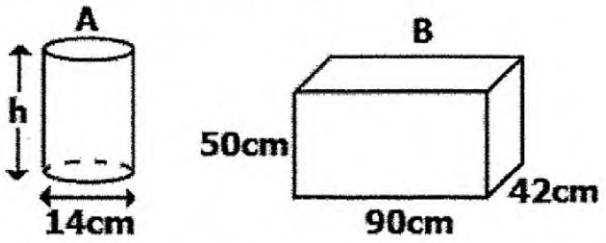
b) How much money does the farmer earn daily from the sale of his milk if the dairy pays him **shs.3,375,000** daily? (2mks)

29. a) Convert **64.942** to the nearest **two** decimal places. (2mks)

b) Write the number shown on the abacus below in **scientific** notation. (3mks)



30. The figure below shows cylindrical tins (A) to be packed in a big box (B).



a) If **5** layers were formed after tins (A) had been packed in box (B). Find the **value** of **h**. (2mks)

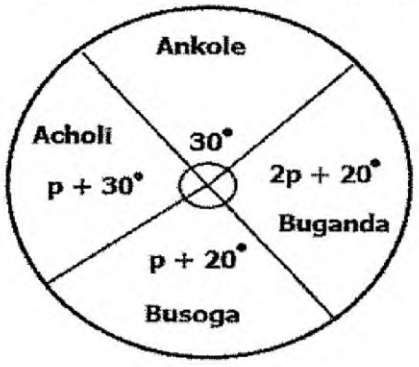
b) Calculate the **volume** of the space left empty after packing tins (A) in box (B). (4mks)

31. Blanchatte shared her salary among her three children; Feni, Jordan and Wako in the ratio of **2:3:5** respectively.

a) If Feni got **shs.180,000,** how much does she earn as her salary. (3mks)

b) How much did Wako get than Jordan? (2mks)

32. The pie-chart below shows the regions people come from in Wobulenzi town. There are **7200** people in the town altogether.



a) Find the **value** of **p**. (3mks)

b) How many people come from Ankole region? (2mks)

Good Luck!