456/1

MATHEMATICS

Nov/Dec 2023

2 Hours: 30 Mins

MEBU EXAMINATIONS BOARD

Uganda Certificate of Lower Secondary Education

S.2 END OF YEAR ASSESSMENT 2023

MATHEMATICS

TIME: 2:30 MIN

INSTRUCTIONS:

Attempt All Items From (A & B).

SECTION A (30 scores)

1. Paul has his bike, he measured the diameter of the tire and found out it was 16cm. what area does the tire of his bicycle occupy?

2. Mr. Jackson wants to put the tiles on the floor of his room which measures 4m by 6m. It is observed that one floor tile measures 20cm by 30cm. find how many tiles are needed to cover his room.

3. Jayden's mother gave him 125000/= to go to the shop and by pineapples for the visitors who will visit them. Jayden will use the fixed transport of 5000/=. The cost of one pineapple is 1500/=. Find the maximum number of pineapples Jayden will buy using the amount available.

4. Assuming your father has a triangular piece of land described by the following inequalities. $x \geq 0$, $y \geq 2x$ and $y \leq 4$. help your father to show him how the piece of land looks.

5. In a certain village, flu symptoms increased every day. It has been observed that the total number of people who gets flu symptoms on a given day is three times the number of people who got the flu symptoms on the previous day. Determine the expression that one would use to find the number of patients on the given day hence find the number of patients on the 20^{th} day.

6. Jemima had a pole measuring 72 units, and shortened by 18units. Calculate the length of the pole she remained with in its simplest form.

SECTION B (40 SCORES)

7. A farmer wants to make a rectangular fence of his maize plantation; he has 18m of the material to cover all the four sides. His objective is to cover an area of $65m^2$. He wants to know the length and width of his rectangular fence Additionally the farmer wants to divide his rectangular piece of land diagonally using another fence X, help him to find the length and width of the rectangular fence and also the length of the diagonal fence X.

8. A couple discovered that their squared wedding photo needs to be adjusted, they visited a photo studio where they were told that for them to achieve the size of the photo they want, the photo needs to be adjusted by the scale factor of 4 using (0,0) as the center of enlargement. Given that the vertices of their old photo are A(1,2), B(1,1), C(2,1), D (2,2), use the graph paper provided to help the couple find the coordinates of the squared photo A^1 B^1 C^1D^1 and also determine the area occupied by the photo.

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