

NAME: _____ SIGNATURE _____

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MATHEMATICS

PAPER 1

NOVEMBER, 2024

$2\frac{1}{4}$ hours



**CLEVERLAND HIGH SCHOOL-MAYA
END OF YEAR ASSESSMENT EXAMS 2024**

**Senior One
MATHEMATICS
PAPER 1**

2 hours and 15 minutes

INSTRUCTIONS TO STUDENTS;

- Attempt two questions in section A and At least 2 questions from section B with at least one question from each part.

SECTION A

Attempt all the questions in this section

Item 1

The ages of five siblings Aisha, Peter, Hawa, Musa and John are 10, 12, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100. Who is the youngest of the five siblings in Mr. John's family?

Item 2

Your guardian has a budget of shs. 700,000 for your school expenses. To get to the school where your guardian wishes to take you for 'A' Level, your guardian drove 4km east from your home to the stage and then 8km north to reach there. However, you realized later that there was a direct route from home to school your guardian could have used.

On reaching the school, you found out that, the school fees, admission fees and uniform fees are shs. 900,000, shs. 100,000 and shs. 350,000 respectively. The school also offers a bursary of: 60% off school fees free admission and eighty seven thousand five hundred shillings off uniform fees to those who got first grade according to your results, you qualify for this bursary.

It also has two payment plans on school fees that the guardians can choose from and they are;

- Paying in two installments that is to say, two thirds of the school fees at the beginning of the term and the balance at their visitation day or end of term.
- Paying in three equal installments, at the beginning of the term, on visitation day and end of term respectively.

Task.

- (a) How far is it from your home to school if you travel through the direct route?
- (b)(i) Since you qualify for the bursary, how much will you pay?
(ii) Will your guardian afford the school expenses according to his budget?
- (c)(i) How much will those who are to pay school fees of shs. 900,000 pay per installment, according to each of the payment plans?
(ii) Which payments plan would you recommend for them and why?

SECTION B

PART I

Attempt one question from this part

Item 3

Your uncle has offered to drive you to your friend's birthday party. He normally drives his car at an average speed of 50km/hr, so he requests you to get directions to the party reception and the time you are supposed to be there so that you decide on when you can leave home to reach on time. You were informed that the party will start at 2:00pm and the directions are:

- From your home, take the north eastern directions and reach the supermarket that is 20km away.
- Then take the road that is south of the supermarket and it will take you 45minutes to reach the junction.
- From the junction, take the south western road and drive 25km to reach the party reception.

On reaching the party reception using the given directions, your friend remembers that there is a direct route from your home to the reception that you could have used but does not know how long it is.

Task.

- (a) (i) Describe the direction of your home from the party reception.
- (ii) How far is the party reception from your home using the direct route?
- (b) What time would you have to leave home for you to reach the party reception on time if you used the direct route?

Item 4

The house of prayer ministries international for a long time has been soliciting money to construct a pentagon church that can congregate the entire church members. The senior pastor has a vision of a pentagon church which can fit exactly in the plot of land available.

He also has to buy a sintruk to transport all the building materials and requirement. The contractor informed him that the area of each triangle that can be formed from the pentagon church will cost him UGX 300,000,000.

He then proceeded to Nina motors to buy a sintruk. A brand new sintruk costs four hundred eighty millions on cash. It can also be bought by paying a deposit of a quarter of the cash price value and later pays UGX 7.5 millions weekly for 50 weeks or pay 24.5 million monthly for 15 months. The pastor does not have the required money to obtain the sintruk on cash.

Task.

- (a) Help the pastor determine the cost of the church.
- (b) How much extra will he pay for the sintruk and explain why?

PART I

Attempt one question from this part

Item 5

In Bukaaru village, Mr. Kyagulanyi had six children: Kintu, Mpindi, James, Talemwa, Mohammed and Nakayi. He made his will and kept it with a friend. After his death, children were fighting for the property as the elder son wanted to claim 50% as the heir. The lawyer saved the situation by reading the will. Nakayi was given 10% of the property. The remaining of the property was shared among the boys and the wife. Kintu was given $\frac{1}{5}$, Mpindi was given 15%, James was given

20%, Talemwa was given 5% and Mohammed was given 20%. The remainder was given to the wife.

Task.

- (a) Help the family administration to know how much property will each take given that Kyagulanyi had property worthy UGX 6,000,000.
- (b) What percentage of Mr. Kyagulanyi's property was allocated to his wife?

Item 6

Mr. Kasozi a farmer in Busembe village in preparing to construct a poultry house in form of a polygon whose exterior angle is 120° more than exterior angle. He is preparing to divide his poultry house into a triangular portion in which he will put the layers, broilers, cloilors and other types of poultry.

Task.

- (a) Help Mr. Kasozi to know the number of triangular houses he made in the poultry house to fit his plan.
- (b) Calculate the interior angle sum of Mr. Kasozi poultry house.

END

MERRY X-MASS AND HAPPY NEW YEAR