

MATHEMATICS Questions Paper 1 2026

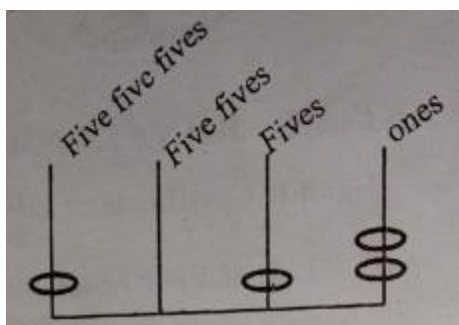
Section A

Attempt *both* items in this section **Item**

1.

Ritah wants to start a business of selling shoes in her S.4 vacation. She has six thousand shillings and according to her budget, she is remaining with two thirds of the total amount she wants. Her father has agreed to give her the remaining amount. She is not sure how much her father is to give her.

She orders for the shoes and the shoes are delivered in a container. She buys the container of shoes at a cost equivalent to the total amount she wants. She will sell the shoes in pairs and on receiving the container that has shoes, the total number of shoes is represented as shown below.



She wants to know the number of pairs that are in the container. Her target is to make a total profit of 60% but she does not know how much she must sell each pair to reach this target.

Task:

- How much will Ritah get from her father.
- How many pairs of shoes are in the container?
- At what price should Ritah sell each pair of shoes to realize her target.

Item 2.

Tom and his son are to go to a certain hospital for medication. Tom wants to know whether the **4 liters** of fuel he filled will be enough to take and bring them back. His vehicle consumes **1.5 liters** of fuel for every **7km** and **2.5 liters** of fuel for every **11km**. the distance from the set off point to hospital is **17km**.

When at the hospital, Tom realizes that he forgot his son's birth certificate yet he is not sure of his age and it is highly needed by the doctor. Tom tell the doctor that he remembers correctly that his age is twice the square of his son's age and the difference between his age and son's age is 45 years. The doctor wants to know the age of Tom's son using this information.

Tom is then told to buy 4 packs of tablets and 3 syrups but he does not know their total cost. The pharmacy sells 2 packs of tablets and a syrup at a cost of **UGX 14,500**. It also sells a pack of tablets and 2 syrups at a cost of **UGX 14,000**.

Task:

- (a) (i) Determine the relationship between distance and litres of fuel for Tom's vehicle.
- (ii) Use the relationship to decide whether the fuel he filled in his car will be enough.
- (b) Use the information that Tom remembers to help the doctor know the age of the son.
- (c) How much money will Tom pay for the quantity of tablets and syrups he is to buy.

Section B Part I

Attempt *one* item in this section **Item**

3.

Patrick runs a stationery shop in Gulu City and he has made an order of boxes. Out of the 70 boxes offloaded at his shop, he realized that there were boxes with green colours which he did not want because of the demand in the city, so he went ahead count all the boxes he had offloaded. He noted that of the offloaded boxes, 10 boxes had green only, 13 had blue only and 4 had red only. 7 boxes had all the three colours he wanted. A total of 34 boxes had green colour, 31 had blue while 23 boxes had red colour only. He will accept the order if the probability of the boxes which are not green exceeds 0.5. The daily number of books sold were recorded as shown below.

64 40 30 69 50 34 55 38

61	64	40	42	70	48	64	32
47	33	64	70	64	58	61	52
64	36	36	43	52	56	52	64
64	36	44	30	46	46	68	69

Patrick wants to know the average number of books that are sold per day so that he can file his tax refunds.

Task:

- (a) Will Patrick accept the order he received or not, justify your answer.
- (b) How many books will he present for his tax refunds?

Item 4.

Wilson is a father to three girls: Rina, Rena and Rita. This term as they were preparing for term three he asked them to write a list of their scholastic requirements. Rina wanted 8 books, 8 pens and 12 pencils. Rena wanted 7 books, 6 pens and 8 pencils. Rita being a candidate wanted 11 books, 5 pens and 9 pencils. The stationery shop sells a book, a pen and a pencil at **UGX 8500**, **UGX800** and **UGX300** respectively. Wilson has a budget of **UGX250, 000** but he does not know whether the money is enough to cater for the bill of the three girls.

The school asked every candidate to come with two cups of the same colour. Rita decided to randomly pick two from the home cup board which has 4 Red and 5 Brown cups with each cup picked not putting it back. She prefers that the both similar cups picked are be red and the chance is at least 50% otherwise she will have to opt for buying the cups.

Task:

- (a) Is the money that Wilson has enough to handle the shopping of scholastics for all the three girls?
- (b) Help Rita know whether she will buy or use the cups at home.

Part II

Attempt *one* item in this section **Item**

5.

Hassan is a builder who has been contracted by his boss to build a house with a balcony at its top. According to the plan, the boss wants that if he sits at the balcony, he views the top of the hotel building, 21.4ft away at an angle of elevation of 25° . the height of the hotel building is 45ft. Hassan wants to know the height from the ground at which he should build the balcony to meet his boss's plan.

Hassan is also going to design the compound of the house with a triangular garden that will be surrounded by circular fence. The garden will have two sides measuring 36m and 42m with the angle between these sides being 60° . Hassan wants to know the perimeter of the fence he will use.

Task

- (a) Help Hassan to determine the height at which he is to build the balcony.
- (b) Determine the perimeter of the fence to use.

Item 6.

Phiona has just been employed by an organization that gives a gross monthly income of **UGX 520,000**. The organization gives the following non taxable allowances.

Housing is **UGX 70,000** per month, **UGX 45, 000** electricity monthly, annual insurance allowance of **UGX744,000**, **UGX30,000** for electricity per month, monthly **UGX 50, 000** for married persons and an annual **UGX 180, 000**. All employees' income is taxed according to the tax structure below.

Taxable Income (UGX)	Rate (%)
First 100,000	5
Next 100,000	10
Next 120,000	15
Next 180,000	20
Next 250,0000	30

Phiona is not married and she wants a total of **UGX950,000** that she wants to invest in business at the end of the month. Her target is to use her net income of the first month to raise part of the money she wants and then borrow the balance from the **SACCO**. The **SACCO** lends money with a compound interest rate of 8% per annum for two years. Phiona wants to know how much she will borrow and interest she will return in this period.

Task

- (a) Determine Phiona's net income.
- (b) Help Phiona to know how much she will:
 - (i) Borrow from the friend.
 - (ii) Return as interest in the two years.

END