

456/1

MATHEMATICS

Paper 1

August 2025

2 hours



Uganda certificate of Lower secondary education

S.1 END OF TERM II ASSESSMENT 2025

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2 hours

INSTRUCTIONS TO CANDIDATES:

- Attempt **all** questions in this paper

ITEM 1.

There is a marathon organized for all willing athletes in some parts of central Uganda especially Kampala District. The ministry of games and sports wants to sponsor most of the talented participants for both secondary and higher education especially those that cannot afford to raise their tuition at the university. The ministry has organised short courses for some participants like basic elementary construction for their own survival, however the organizer decided to make a survey in different parts.

He travelled a bearing of 070° from Kampala to Entebbe for 60km. From Entebbe he then travelled to Nansana at a bearing of 150° for 90km, then to Kololo airstrip at a bearing of 210° for 70km.

However, an engineer has been tasked to make drawing sample of the construction skill of a triangular area ABC for the setup of the tent and other equipments, where $AB = 6\text{cm}$, $BC = 5\text{cm}$, $ABC = 60^\circ$. This will be used during the marathon.

Task;

- (i) Assist the surveyor to determine the shortest distance between Entebbe and Kololo airstrip
 - (ii) What bearing did he move from Entebbe to Kololo airstrip?
- (b) Help an engineer to accurately draw the triangular Area.

ITEM 2.

On birthday party. Five siblings plan to buy their grandmother a gift. The initial plan was each one of them buys their own gift to give to the grandmother but later they realized that if they do it as a group would be cheaper. So, they mobilized themselves and each person contributed as follows.

Sibling A contributed one hundred fifty thousand Shillings (150,000)

B contributed $1\frac{1}{2}$ of the amount of A

C contributed 80% of the amount A

D contributed a fraction which is $\frac{1}{4}$ of the amount C

E contributed the balance to make shs 700,000 which was the cost of the gift.

On the day of the birthday, they bought 20 packets of biscuits, 15 bottles of soda and 24 eggs.

If each item costs shs 2,000, shs 1000 and 500 respectively

Task;

- Help them find the costs of all items
- How much amount did each student contribute and who of the five students contributed more money?
- In which other way could they contribute the money more fairly and how much would each contribute that way?

ITEM 3.

The world boxing association holds a general briefing for all the interested heavy weights boxers from different countries all over the world. The boxing association notices that some boxers do not qualify for the minimum requirement needed to join the competition. Its necessary to have communication for the boxers to know the weights and heights for a fair match for the two opponents to face each other.

The following are some of the collected information from the twelve (12) boxers.

Name	Ali	Obua	Paul	Fred	Lewis	Fury	Josh	Alvin	Oscar	Hops	Pat	Dev
Mass (kg)	105	100	66	110	80	120	70	65	60	75	110	100
Height (cm)	178	178	165	191	196	200	160	175	170	185	180	165

Task;

- With reason(s) based on plotting from the data above, suggest the appropriate fair height for the boxers.
- The association suggests that the match for the special medal should have weight between 175 and 195. Which of the boxers would qualify for the offer.

END

Page 2 of 2