

P456/1

MATHEMATICS

PAPER 1

NOVEMBER.2023

2 ½ HOURS



SHAPTA JOINT ASSESSMENT BOARD

Uganda Certificate of Lower Secondary Education

MATHEMATICS

PAPER 1

SENIOR ONE

TIME: 2HRS:30MINS

INSTRUCTIONS TO LEARNERS:

- Attempts all items in this paper
- Each item will be scored considering different learning outcomes in different topics.

1. Five girls whose homes when marked on a grid make a trapezium, wanted to buy clothes. They realized that if they buy them in a bunch, it will be cheaper. So they mobilized themselves and each person contributed as follows:

Girl 1: Contributed one hundred thirty-three thousand two hundred fifty shillings.

Girl 2: Contributed 20% more than that of girl 1

Girl 3: Contributed $1\frac{1}{2}$ of the amount girl 1 contributed.

Girl 4: Contributed a fraction that is $\frac{1}{5}$ less than the fraction of girl 3 of the amount of girl 1

Girl 5: She contributed the balance required to make the Shs. 800,000 required.

TASK:

- a) Locate the homes of the girls on a grid while labeling their coordinates. (05 scores)
- b) What amount did each girl contribute? (05 scores)
- c) In which other way could they contribute the amount required fairly and according to that way, how much would each contribute? (10 scores)

2. At school you are requested to use a piece of wood to create a rectangular photo frame with a circular space in it where the photo will be put. Your parents have no money to buy you a new piece of wood but you have a piece of wood that is in shape of a parallelogram. Two of its angles are made up of an obtuse angle and two of them are made up of an acute angle. One of the sides is 6cm and the other 4cm.

TASK:

Illustrate accurately how you will cut the piece of wood you have to create what the teacher assigned you to do clearly showing and labelling the;

- a) Obtuse and acute angles of the piece of wood you have. (05 scores)
- b) The length and width of the rectangular piece of wood you will be able to cut out of the wood. (10 scores)
- c) The circular space. (05 scores)

3. You work in an art and design shop. You print different objects on clothes as requested by your customers. A customer comes and requests you to print triangles, circles and squares on his cloth following a particular pattern that will make the clothe beautiful. However, he first gives you a piece of paper that is 12cm in length and 8cm in width to illustrate how you plan to arrange the shapes on the cloth. As you are still talking to the customer, someone calls you requesting you to compute something, so you request the customer to assist you with his phone calculator and on opening it you find a figure 455.

TASK:

- a) Show how your illustration will look like? (10 scores)
- b) Which input and operation do you think the customer would have put in the calculator to get the figure you found on the screen? (10 scores)

4. Your facilitator gathered information on the ages of some few learners in the school from different classes. Below are his records:

14	15	16	17	18	21	18	17	15	16	21
21	17	14	18	15	17	17	15	16	21	18
18	21	17	15	14	21	16	17	16	21	16
15	16	21	17	18	16	17	21	18	15	17

TASK:

- a) In which other way can the facilitator record the information above such that even another person looking at it can easily tell the number of learners in each age group? (05 scores)
- b) Illustrate your suggestion in (a) above. (05 scores)
- c) State which age are the majority of the learners in the school. (03 scores)
- d) Your facilitator wants to sell either cartoon stickers or stickers for different singers in the school. According to the above records, which stickers do you think will be suitable? (07 scores)

END