

END OF YEAR ASSESSMENT 2024

SUBJECT: MATHEMATICS

CLASS : S.2

DURATION: $2\frac{1}{4}$ HOURS

INSTRUCTIONS.

Attempt all the questions in section A and any two from section B

Show all necessary working clearly as untidy work will lead to loss of scores

Extra number of items attempted will not be assessed.

Use $\pi = \frac{22}{7}$ where necessary.

Item one

Peter , Eric and Derrick rent the same house, they normally contribute to the meals because they agreed to pay for meals together. Peter always contributes $\frac{1}{2}$, eric contributes $\frac{1}{4}$ of the remainder and derrick contributes the rest which is shs.30,000. On the rentals where they are staying 20% are girls and there are 6 boys.

Task

- How much did they contribute altogether?
- How much did each person contribute?
- Express the contribution of eric as a percentage of the total contribution.
- How many girls are also renting there?

Item two

In a geography lesson Alex learnt the following Mountains in Uganda : Rwenzori and Elgon Kenya. Mt. Longonot and Mt.Elgon ,Tanzania : Mt meru and Mt, Kilimanjaro.

Task

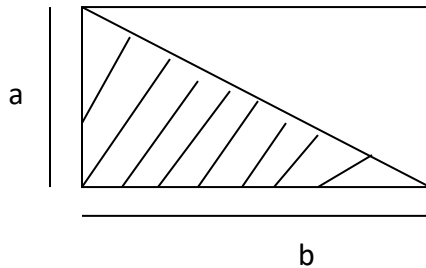
- Draw an arrow diagram to show the relationship between the countries and the mountains found there.

- b) What is the domain and range from your relation?
- c) What is the type of mapping shown?

SECTION B
Attempt any two items
Item three

A garden of beans is rectangular in shape with length as **b** metres and width as **a** meters as shown in the figure .

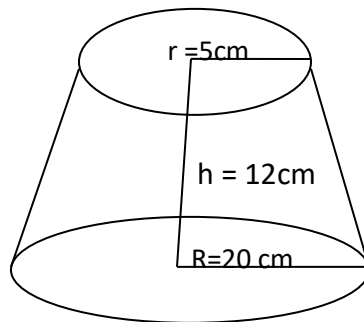
Bona used the shaded part to plant his beans.



- a) explain how the area of the shaded part can be got.
- b) Write the expression for the area A in terms of a and b
- c) If the area of the shaded part, is 464.52 cm^2 and the length, b is 15.24m. what is the dimension of the width , a.

Item four

David went to the market and bought one bucket which is as follows.



he wants to buy similar buckets by sending an order to the manufacturer but the manufacturer wants him to include the capacity and total surface area of thr material used.

Task

Help him to find the ;

- a) Volume of the bucket
- b) Total surface area of the material used (hint . the bucket is covered eth a lid)

Item five

When going to the school from home , David passes through a trading centre every days. From home to the market he moves a distance of 4000m on a bearing of 060° . from the market he then moves due south for 2000m and finally moves due west for 250m. but his friend advised him that there is a direct route of going to school without passing through the market.

Whenever he reaches the market, he always buys 3kg of sugar and 4kg of rice for the school to use at shs.3000 and shs.,3200 per kilogram respectively and because he is a daily customer the shop keeper normally gives him 10 % discount on the items bought.

Task.,

- a) What distance will he move if he decides to use a direct route(draw an accurate diagram)
- b) What is the bearing of David's school from home?
- c) If he uses a motorcycle along the direct route and move at an average speed of 60km^{-1} , what time does he take to cover the journey?
- d) How much does he spend in the market on all the items bought?

END

"Practice makes mathematics easier"

