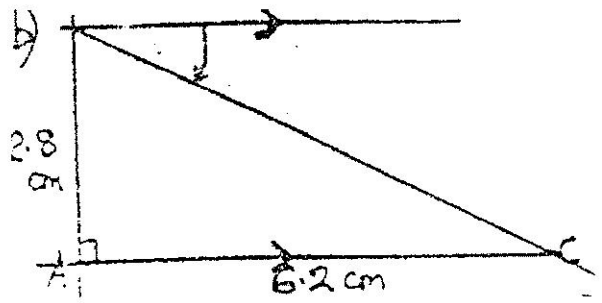
In part (b) of the question, candidates needed to use the distance AC = 6.2 ± 0.1 cm from the diagram drawn in part (a) and the scale 1 cm:3 m to obtain the diagram shown below.



Question 20

(*a*) Given that the matrix $A = \begin{pmatrix} 2 & 3 \\ 3 & 4 \end{pmatrix}$, find A^{-1}, the inverse of A. (1 mark)

(*b*) Kantai bought 200 bags of sugar and 300 bags of rice for a total of sh 850 000. Buya bought 90 bags of sugar and 120 bags of rice for a total of sh 360 000. If the price of a bag of sugar is sh *x* and that of rice is sh *y*,

(i) Form two equations to represent the information above. (2 marks)

(ii) Use the matrix A^{-1}, to find the prices of one bag of each item. (2 marks)

(*c*) Kali bought 225 bags of sugar and 360 bags of rice. He was given a total discount of sh 33 300.

If the discount on the price of a bag of rice was 2%, calculate the percentage discount on the price of a bag of sugar. (3 marks)

This question appeared to be quite easy but unfortunately, it was one of the poorly performed questions by most candidates.

The requirements of the question were as follows:

- Finding the inverse of a 2 × 2 matrix.
- Finding two simultaneous equations to represent given information.
- To use the matrix inverse to solve the simultaneous equations.
- Calculating percentage discount on a commodity.