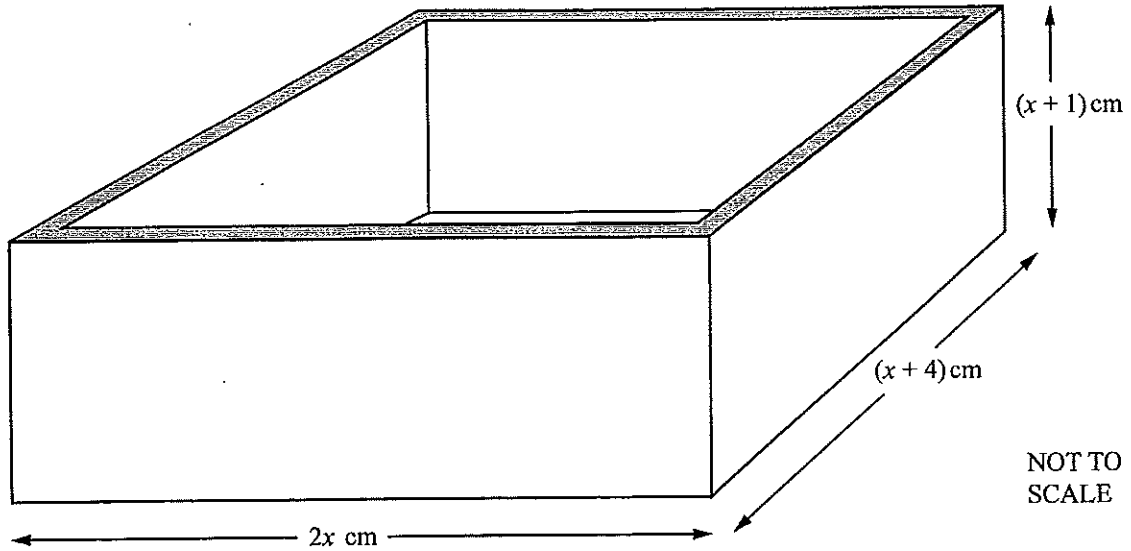


IGCSE – Volume - 2

May 03 Paper 4

6



A rectangular-based **open** box has **external** dimensions of $2x$ cm, $(x+4)$ cm and $(x+1)$ cm.

- (a) (i) Write down the volume of a cuboid with these dimensions. [1]
(ii) Expand and simplify your answer. [1]
- (b) The box is made from wood 1 cm thick.
- (i) Write down the **internal** dimensions of the box in terms of x . [3]
(ii) Find the volume of the **inside** of the box and show that the volume of the wood is $8x^2 + 12x$ cubic centimetres. [3]
- (c) The volume of the wood is 1980 cm³.
- (i) Show that $2x^2 + 3x - 495 = 0$ and solve this equation. [5]
(ii) Write down the **external** dimensions of the box. [2]