

Numeracy in Construction

Calculating Volume

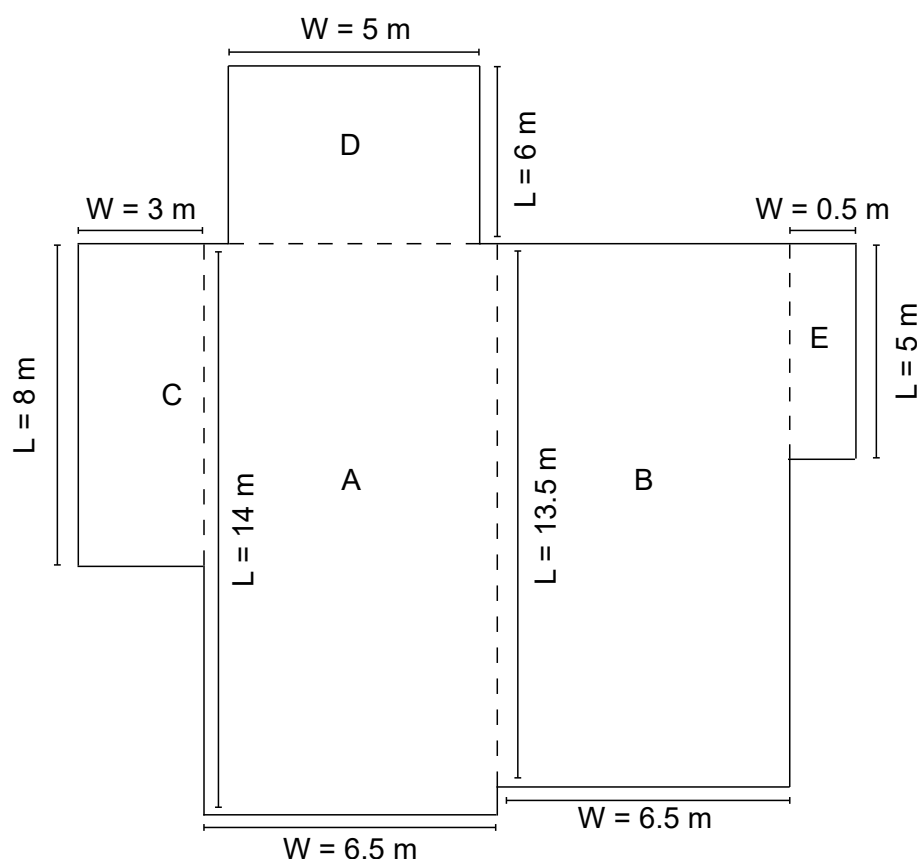
Worksheet

View the video attentively. As you watch, complete the following questions and calculations.

1. There is a box with the following measurements: length = 16 cm; width = 10 cm; depth = 6 cm. Given the volume equation $V = L \times W \times D$, what is the volume of this box?
Show your working and remember to include the unit of measurement.

2. A small construction team is pouring a concrete slab for the foundation of a home. They need to check whether the 24 cubic metres which have been ordered will be enough. The concrete slab will have a height of 0.1 m, or 10 cm.

The floor plan has been broken into five rectangles (A, B, C, D and E) to make calculations easier. Once we have the volumes of each of the five smaller rectangular prisms, we can add these to find the total volume of the concrete slab.



a) Given the volume equation $A = L \times W \times D$, what is the volume of rectangular prism A? Show your working and remember to include the unit of measurement.

b) Given the volume equation $B = L \times W \times D$, what is the volume of rectangular prism B? Show your working.

c) Given the volume equation $C = L \times W \times D$, what is the volume of rectangular prism C? Show your working.

d) Given the volume equation $D = L \times W \times D$, what is the volume of rectangular prism D? Show your working.

e) Given the volume equation $E = L \times W \times D$, what is the volume of rectangular prism E? Show your working.

f) What is the total volume of the concrete slab and will the 24 cubic metres which have been ordered be enough? Show your working.