

**16th March**

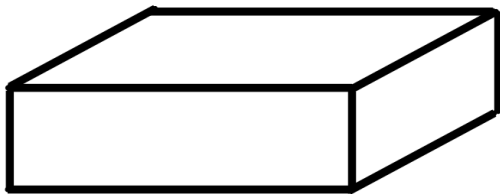
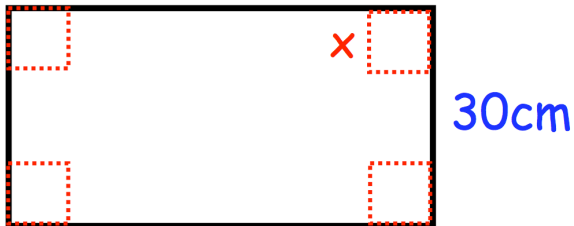
Corbettmaths

Factorise  $15x^2 + 32x + 16$ 

A rectangular sheet of card measures 50cm by 30cm.

Four squares of side length  $x$  cm are cut from each corner and the remaining card is folded to make a tray.

50cm



Show that the volume of the tray is  $V = 1500x - 160x^2 + 4x^3$

Find the value of  $x$  for which  $V$  is a maximum.

Find the maximum value of  $V$