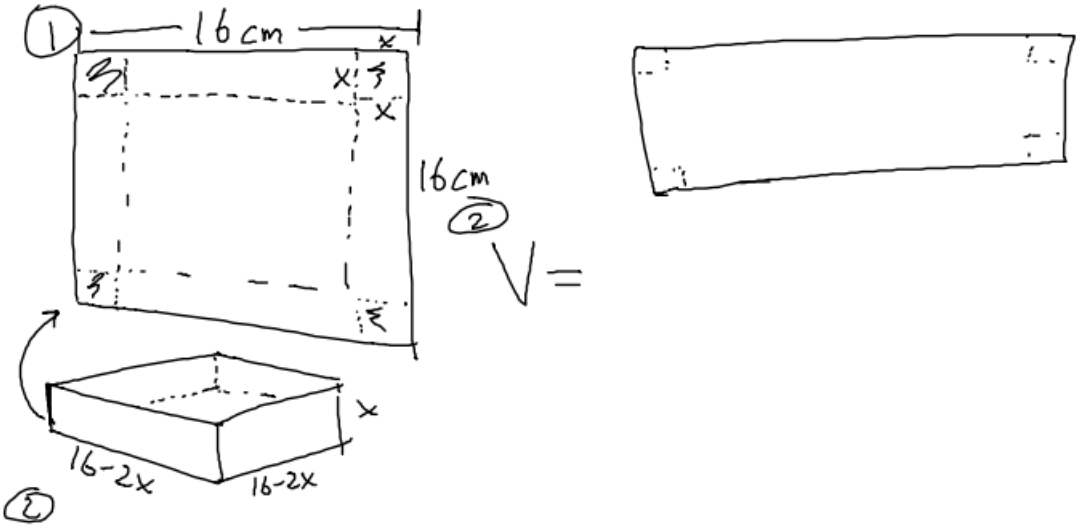
We have a 16x16cm square of cardboard. How much to cut from each corner to make an open top box with the maximum possible volume?



② $V =$

③ $V = (16-2x)(16-2x)x$

④ $0 \le x \le 8$

⑤ $V = (256 - 64x + 4x^2)x$

$V = 256x - 64x^2 + 4x^3$

$V'(x) = 256 - 128x + 12x^2 = 0$

$4 \overline{)128}\ 32$ (−12)

$4(3x^2 - 32x + 64) = 0$

$4(3x - 8)(x - 8) = 0$

$x = 8/3 \approx 2.7$ $\quad x \neq 8$

⑥