

P194 #66

Volume of a box

height of the box

length of the box

width of the box

$$V(x) = x(60-2x)(15-2x)$$

cubic function that models the volume.

$$V = h \cdot L \cdot w$$

b) Determine x so that V_{box} at least 450 in^3 .

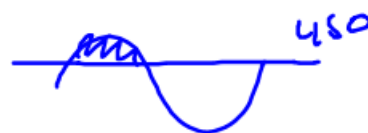
~~$x = 10.24$~~



$$x(60-2x)(15-2x) \geq 450$$

Graph this

look at the table



$$0 < x < 7.5 \quad 0.55 \leq x \leq 6.79$$

