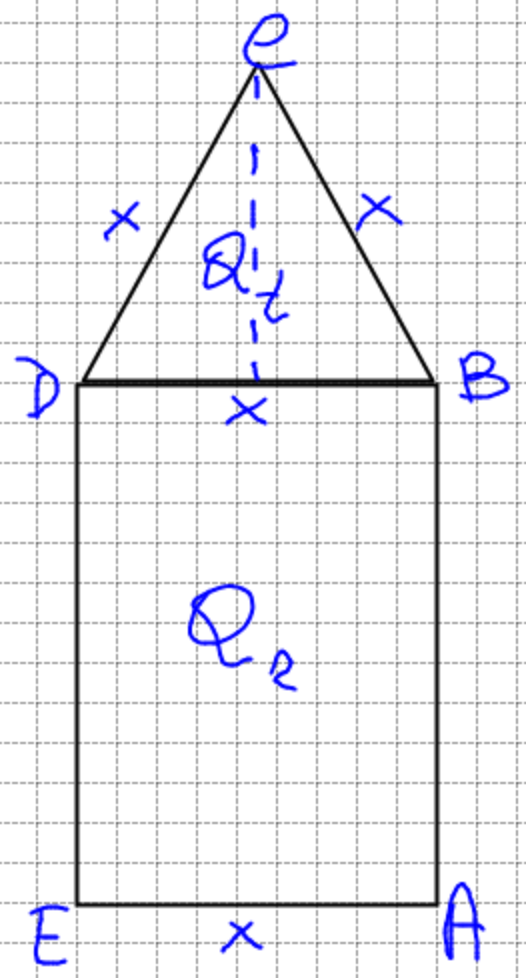
N° 156 pag 119



$2p = 324$ cm

$AE = x$

$Q = Q_r + Q_t$

$2p = x + 2\overline{AB} + 2x$

$2p = 3x + 2AB$

$324 = 3x + 2AB$

$AB = \frac{324 - 3x}{2}$

$x > 0$

$\frac{324-3x}{2} > 0$

$x < 108$

$A_r = x \cdot \frac{324-3x}{2}$

$h = \sqrt{x^2 - \frac{x^2}{4}} = \sqrt{\frac{4x^2 - x^2}{4}} =$

$= \sqrt{\frac{3}{4}x^2} = \frac{\sqrt{3}}{2}x$

$A_t = \frac{\sqrt{3}}{2}x \cdot \frac{x}{2}$

$Q(x) = x \cdot \frac{324-3x}{2} + \frac{\sqrt{3}}{2}x \cdot \frac{x}{2}$

$Q(x) = \frac{324x - 3x^2}{2} + \frac{\sqrt{3}x^2}{4}$

$Q(x) = x^2\left(\frac{\sqrt{3}-6}{4}\right) + 162x$

$0 \leq x \leq 108$

Se $x = 0 \rightarrow$ nu există figura geometrică

Se $x = 108 \Rightarrow 50507 \Rightarrow h_2 = 0$

$D_{Q(x)} = \{x \in \mathbb{R} \mid 0 < x < 108\}$