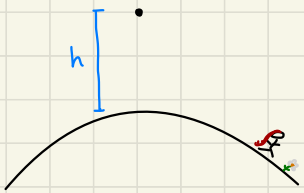
Es 86 pag 613

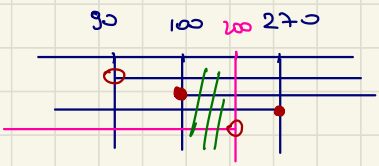


$h \geq 200m$
$h \leq 540m$

(1) $200 \leq 2h \leq 540$ c.c. So che all'inizio $h < 200$ perché lo dice il problema
(2) $6h > 540$
Quanto vale h al minimo e al massimo?

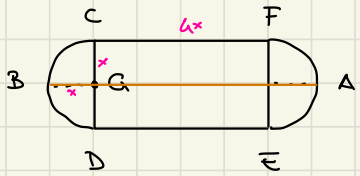
Devono essere vere entrambe, di conseguenza sistema

$$\begin{cases} 200 \leq 2h \leq 540 \\ 6h > 540 \end{cases} \rightsquigarrow \begin{cases} 200 \leq 2h \\ 2h \leq 540 \\ 6h > 540 \end{cases} \rightsquigarrow \begin{cases} h \geq 100 \\ h \leq 270 \\ h > 90 \end{cases}$$



$\rightsquigarrow$ Sol: $100 \leq h < 200$

Es 87



$CG = x = GD = BG$
$DE = 4x$
Perimetro $\leq 30m$
Quanto può valere al max AB?

$P = DE + CF + \text{Arco}(CD) + \text{Arco}(EF)$
$= 4x + 4x + (\text{Semicirconferenza di raggio } x) \cdot 2$
$= 8x + 2\pi x = 2x(4+\pi)$

$P \leq 30m \quad 2x(4+\pi) \leq 30 \rightsquigarrow \boxed{x \leq \frac{15}{4+\pi}} \quad AB = x + 4x + x = 6x$

$AB = 6x \leq 6 \cdot \frac{15}{4+\pi} \quad AB \leq \frac{90}{4+\pi} \rightsquigarrow$ Max: $\boxed{AB = \frac{90}{4+\pi}}$