

Thermin Problem

Exercise to Lecture 4

$h(x) = +1 \quad \forall x \text{ with } a \leq x \leq b, \quad a, b \in \mathbb{R}$

$h(x) = -1 \quad \text{otherwise}$

consider n points with labels $+$ or $-$

$n = 1 \Rightarrow 2 \text{ options}$

1.



$\Rightarrow VZ \geq 1$

$n = 2 \Rightarrow 4 \text{ options:}$



$\Rightarrow VZ \geq 2$

$n = 3$

consider 3 points like



\Rightarrow cannot be solved
by only one interval

$\Rightarrow \underline{\underline{VZ = 2}}$