Variant of book's ER 2.3.5 Max/Min and Sup/Inf chart. §2.3 BS4

Consider the below subsets S of $\mathbb{R}$. Find the $\max S$ and $\min S$, provided they exist (use $\nexists$ for does not exists). Find the $\sup S$ and $\inf S$ in the extended sense (so in $\widehat{\mathbb{R}} \overset{\text{i.e.}}{=} \mathbb{R} \cup \{\pm\infty\}$). No proofs needed. Just use your intuition. Just type your solutions directly into the below chart. Some samples from class are included.

	S $\Downarrow$	$\min S$	$\inf S$	$\max S$	$\sup S$
recalls $\Rightarrow$	$S \subseteq \mathbb{R}$	must be in S	in $\widehat{\mathbb{R}}$	must be in S	in $\widehat{\mathbb{R}}$
Samples from class.					
sample	$[0, \sqrt{2}]$	0	0	$\sqrt{2}$	$\sqrt{2}$
sample	$\mathbb{R}$	$\nexists$	$-\infty$	$\nexists$	$+\infty$
Now onto the assigned homework problems.					
(1)	$\{x \colon x^2 - 4x - 5 \leq 0\}$				
(2)	$\left\{1 + \frac{(-1)^n}{n} \colon n \in \mathbb{N}\right\}$				
(3)	$(0,1) \cap \mathbb{Q}$				

Part of chart to fill out. You can just print this page and fill out the chart below.

	S $\Downarrow$	$\min S$	$\inf S$	$\max S$	$\sup S$
(1)	$\{x \colon x^2 - 4x - 5 \leq 0\}$				
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