MATH 633 HOMEWORK 9

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Exercise. (Problem 1) Let $x \in F_1$. Since Ω is bounded, there exists an $R > 0$ such that $\Omega \subset C(x, R)$. Then $F_1 \setminus C(x, R)$ and $F_2 \setminus C(x, R)$ are disjoint, closed sets whose union is $\mathbb{C} \setminus C(x, R)$, which is connected. Therefore, either $F_1 \setminus C(x, R)$ or $F_2 \setminus C(x, R)$ is empty. In other words, either $F_1 \subset C(x, R)$ or $F_2 \setminus c(x, R)$.