COMPLEX ANALYSIS, HW # 4

Section 7, problems **41, 47, 49, 69, 72** and these problems:

Problem 1.

Let $K \subset \mathbb{C}$ be a compact set. Prove that $u(z) = -\log(\text{dist}(z, K))$ is a subharmonic function in $\mathbb{C} \backslash K$.

Problem 2.

Let $h(z)$ be a C^2 function in a neighborhood of the closed unit disc. Prove that inside the unit disc h can be represented as a difference of two subharmonic functions.