

* Hint for problem (2), Asst 2.

$$a, b, c \in \mathbb{C}, a \neq 0$$

Solⁿs of $az^2 + bz + c = 0$ are

$$z = \frac{-b + \underbrace{(b^2 - 4ac)^{1/2}}_{2a}}{2a}$$

→ double-valued fⁿ, unless
 $b^2 - 4ac = 0$, in which case
it's single valued.

* Hint for problem (6), Asst 2.

You may use the following without
proof:

Given $V, W \subseteq \mathbb{C}$, there holds:

$$\partial(V \cup W) \subseteq \partial V \cup \partial W.$$

(Feel free to prove this if you so
choose).