- 1. Let U be a subset of \mathbb{C} . Then define the following:
 - (a) U is open.
 - (b) The boundary of U.
 - (c) U is connected.
 - (d) U is a domain.
- 2. Let $f:(a,b)\to \mathbf{R}$. What is the definition of the derivative, f'(x), in terms of a limit of difference quotients?