Montel theorem and some related results

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In this short note, I will recover the proof for Montel's theorem and some applications/consequences. A nice result that follows from Montel's theorem is the Riemann mapping theorem - which says that every simply connected set in complex plan $\mathbb C$ is either the whole plane or biholomorphic to the unit disk.

1 Introduction

In this section, I will define some concepts that will be used.