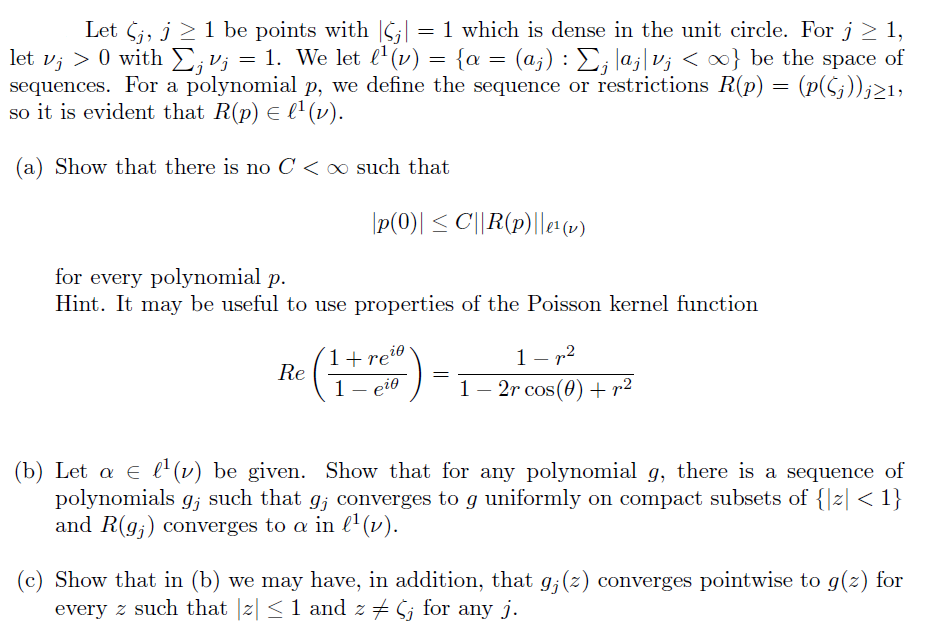
Team Analysis

**Problem 1**

1. Let with
2. converges to a harmonic function on every compact subset of , where .
3. .
4. Let which satisfies for some

Then we have

**Problem 2**

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**Problem 3**

Consider the following initial-boundary value problem

1. Let and be two smooth solutions to on .

If , , then

1. Let be a positive constant. Solve with for all .
2. Assume that on and be the solution to . Then such that

**Problem 4**

Let , monotone decrease

Suppose such that ,

Prove