Computationally Hard Problems

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Hand-in for week: 3

Exercise 1

A yes-no-problem is in $RP_{1/10}$ if there is a polynomial p and a randomized p-bounded algorithm A such that for every input X the following holds:

True answer for X is YES then $P_R[\text{A(X, R)} = \text{YES}] >= 1/10$
True answer for X is NO then $P_R[\text{A(X, R)} = \text{NO}] >= 1$

a)

Prove that $RP_{1/10} = RP$ and $RP \subset BPP$