Putnam Exam Seminar
Fall 2013

Quiz 9
December 4

Exercise 1. Let f be a real-valued function on the plane such that for every square $ABCD$ in the plane, $f(A) + f(B) + f(C) + f(D) = 0$. Does it follow that $f(P) = 0$ for all points P in the plane? [Putnam 2009, A1]

Exercise 2. Evaluate

$$\int_2^4 \frac{\sqrt{\ln(9-x)}}{\sqrt{\ln(9-x)} + \sqrt{\ln(x+3)}}\, dx.$$

[Putnam 1987, B1]