RANDOM WALKS IN THE POSITIVE QUADRANT. III

A. A. Mogul'skii and B. A. Rogozin

In this article, we obtain precise formulas for constants in the local and integral theorems proven in [1, 2]. We also propose a version of the integral theorem which complements the main result of [2] and give a probabilistic interpretation of a solution to an integral equation in the positive quadrant.

Key words and phrases: renewal function, renewal equation, factorization components.

Mogul'skij Anatolij Al'fredovich Sobolev Institute of Mathematics,

> 630090 Novosibirsk, Russia. E-mail: mogul@math.nsc.ru

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Rogozin Boris Alekseevich

Omsk Branch of the Sobolev Institute of Mathematics, 644099, Omsk, Russia. E-mail: zgm@iitam.omsk.net.ru

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^{1.} Mogulskii A. A. and Rogozin B. A. (1999) Random walks in the positive quadrant. I. Local theorems, *Mat. Trudy.* v. 2, N 2. 57–97 (Translated from Russian: (2000), *Siberian Adv. Math.* v. 10, N 1, 34–72.)

^{2.} Mogulskii A. A. and Rogozin B. A. (2000) Random walks in the positive quadrant. II. Integral theorem, *Mat. Trudy* v. 3, N 1, 48–118 (Translated from Russian: (2000), *Siberian Adv. Math.* v. 10, N 2, 35–103.)