

ON MOMENTS OF LADDER HEIGHT VARIABLES*

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Let X, X_1, X_2, \dots be i.i.d. random variables, $EX = 0$, $E|X| > 0$, and $S_n = X_1 + X_2 + \dots + X_n$. Let $F(x) = P(X^+ < x)$, $G(x) = P(X^- < x)$ and $N = \inf\{n \geq 0: S_n < 0\}$. For $p > 1$, it is shown that $E|S_N|^p < \infty$ if and only if

$$\int_0^{\infty} x^{p+1} dG(x) / \int_0^{\infty} y(y, x) dF(y) < \infty.$$

*To appear in Advances in Applied Mathematics, 1986.