where M is a system of all probability measures on $(R^2, \mathscr{B}^2)$ such that $\mu(|h|) < < +\infty$. Then

$$L(y \rceil h) = \inf\{\nu(h^*) : \nu \in M_{\text{fin}}, \quad \nu(g^*) = y\} \tag{3.17}$$

where M_{fin} is the system of all probability measures on $(R^2, \mathscr{B}^2)$ with finite supports.

Proof. It is obvious from Theorem 3.2 and Lemma 3.2 that

$$L(y \mid h) = \inf\{\nu(h^*) : \nu \in M^*, \quad \nu(g^*) = y\}$$

where M^* is the system of all probability measures on $(R^2, \mathscr{B}^2)$ such that $\nu(T|h|) < < +\infty$. Now it is sufficient to use the following assertion (see e.g. MULHOLLAND, ROGERS [9]): Let $f_1, \ldots, f_k$ be real Borel measurable functions on a measurable space Ω. Let η be a probability measure on Ω such that $\eta(|f_i|) < +\infty$, $i = 1, \ldots, k$. Then a probability measure η' with a finite support exists such that $\eta'(f_i) = \eta(f_i)$, $i = 1, \ldots, k$.

Remark 3.2. It is possible to define other classes of unimodal distributions modified in various ways, e.g. the class $U_{11}^*[x_0, y_0]$. This class consists of all probability measures on $(R^2, \mathscr{B}^2)$ that coincide with measures from $U^*[x_0, y_0]$ in the first open quadrant relative to (x_0, y_0) and are arbitrary in the rest of the plane.

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