ON SHARPNESS OF SOME INTEGRAL INEQUALITIES
AND AN INTEGRAL EQUATION OF VOLterra TYPE

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Abstract. The sharpness of some recent integral inequalities is discussed and the corresponding extremal functions are pointed out. It is also proved that the cases of equality can equivalently be obtained by solving an integral equation of Volterra type with discontinuous kernel \( \chi_{A}(t) \). This integral equation of independent interest is solved for every measurable set \( A \) on \( (a, b), -\infty < a < b < \infty \).

Key words and phrases: integral inequalities, integral equations, decreasing function, increasing function.

REFERENCES