SOME REFINEMENTS OF YOUNG TYPE INEQUALITIES

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Abstract. In this paper, we study some improvements of Young type inequalities. We obtain some reverse improvements of Young inequality. Among other results, we show a refined Young inequality. For $v \in [0,1]$ and $a,b > 0$, then

$$a\nabla_v b \leqslant M_v^R(h) a \sharp_v b,$$

where $M_v(t) = 1 + v(1-v)\frac{(t-1)^2}{t}$ and $h = \frac{b}{a}$. And we also obtain a new Young type inequality. Furthermore, corresponding operator inequalities are also established.

Mathematics subject classification (2020): 15A39, 47A63.
Keywords and phrases: Young inequality, Kantorovich constant, operator inequalities.

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Paper JMI-16-78

Journal of Mathematical Inequalities
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