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L'Hospital Type Rules for Monotonicity, with Applications

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Abstract: Let f and g be differentiable functions on an interval (a, b) , and let the derivative g' be positive on (a, b) . The main result of the paper implies that, if $f(a+) = g(a+) = 0$ and $\frac{f'}{g'}$ is increasing on (a, b) , then $\frac{f}{g}$ is increasing on (a, b) .



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