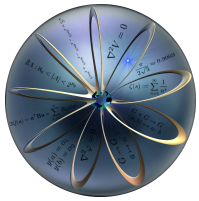

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example of increasing/decreasing/monotone function

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The function $f(x) = e^x$ is strictly increasing and hence strictly monotone. Similarly $g(x) = e^{-x}$ is strictly decreasing and hence strictly monotone. Consider the function $h : [1, 10] \mapsto [1, 5]$ where $h(x) = \sqrt{x - 4\sqrt{x-1}+3} + \sqrt{x - 6\sqrt{x-1}+8}$. It is not strictly monotone since it is constant on an interval, however it is decreasing and hence monotone.