

Name:

Student ID#:

SR:

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Q1) Find: a) the intervals of increase and decrease b) the local maximum and minimum values

$$f(x) = x - \frac{1}{6}x^2 - \frac{2}{3}\ln x$$



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Q2) Find the limit

$$\lim_{x \rightarrow \infty} (x^2 + 1)^{\frac{1}{\ln x}}$$