



A VISUAL APPROACH : A COROLLARY OF NAPIER'S INEQUALITY

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COROLLARY:

$$\text{If, } x > 1 \text{ then, } 1 < \frac{\ln x}{1 - \frac{1}{x}} < x$$

$$\text{If, } 0 < x < 1 \text{ then, } x < \frac{\ln x}{1 - \frac{1}{x}} < 1$$

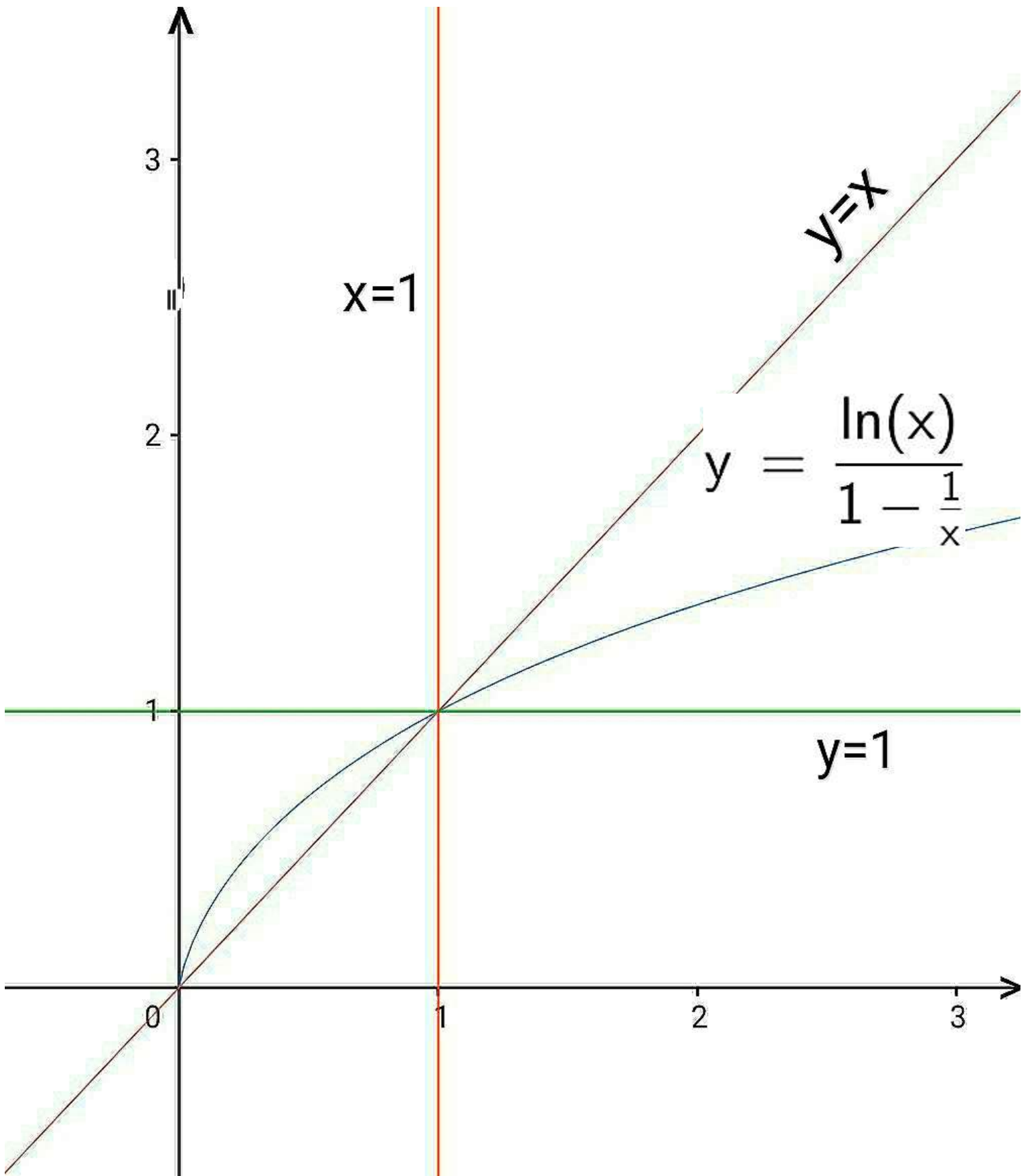
$$\text{Where, } x \in (0, 1) \cup (1, \infty)$$

If, $x > 1$ then, $1 < \frac{\ln x}{1 - \frac{1}{x}} < x$

If, $0 < x < 1$ then, $x < \frac{\ln x}{1 - \frac{1}{x}} < 1$

Where, $x \in (0, 1) \cup (1, \infty)$





Proof is clear from the above diagram.

1. Acknowledgment:

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Reference:

[1] Roger B. Nelson, Proof Without Words 1 ,P-66 ,
Mathematical Association of America.

