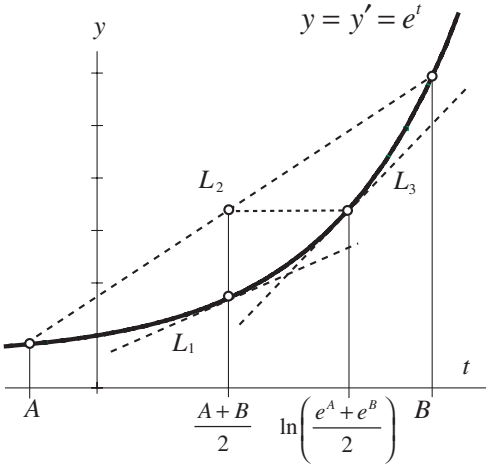
Proof Without Words: Exponential Inequalities

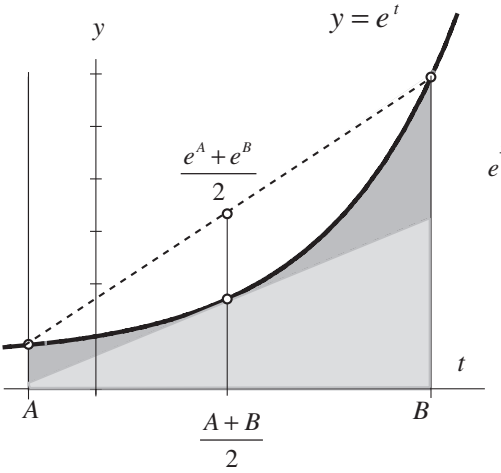
$$A < B \Rightarrow e^{\frac{A+B}{2}} < \frac{e^B - e^A}{B - A} < \frac{e^A + e^B}{2}$$



First semester calculus:

$$m(L_1) < m(L_2) < m(L_3)$$

$$e^{\frac{A+B}{2}} < \frac{e^B - e^A}{B-A} < \frac{e^A + e^B}{2}$$



Second semester calculus:

$$e^{\frac{A+B}{2}}(B-A) < \int_A^B e^t dt < \frac{e^A + e^B}{2}(B-A)$$

$$e^{\frac{A+B}{2}} < \frac{e^B - e^A}{B-A} < \frac{e^A + e^B}{2}$$

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