Calc II in class - Tuesday, June 15

The picture below shows the graph of $f(x) = e^{x^2}$ over the unit interval. We wish to estimate

$$\int_0^1 e^{x^2}\,dx$$

using approximating sums.

1. Decide whether each of the following types of sums will yield an upper bound or a lower bound for the actual value.
   (a) Left
   (b) Right
   (c) Midpoint
   (d) Trapezoidal
2. Write out the left sum with four terms.
3. Write out the trapezoidal sum with four terms.

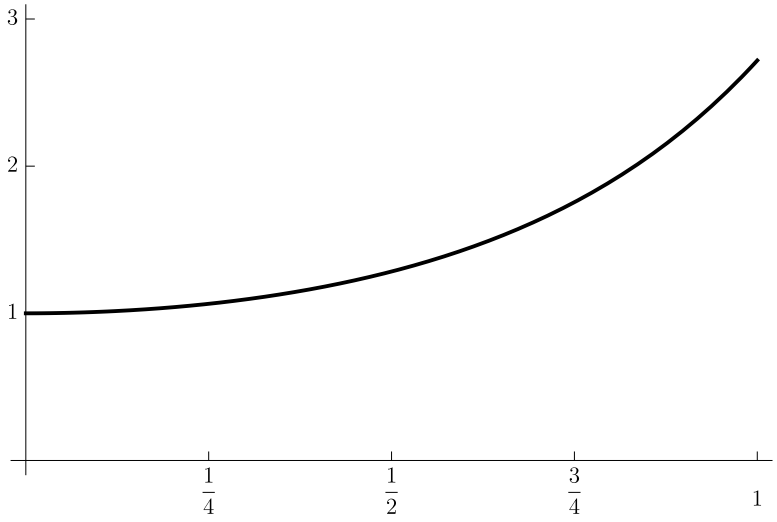

Figure 1: The graph of $f(x) = e^{x^2}$