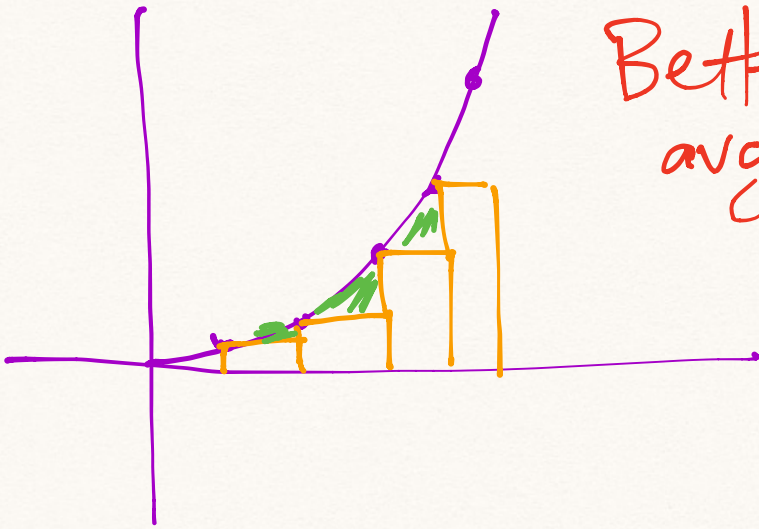


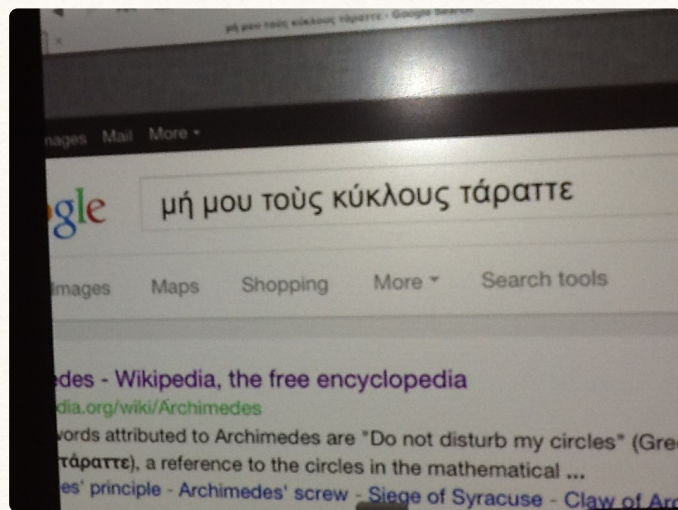
lower
upper

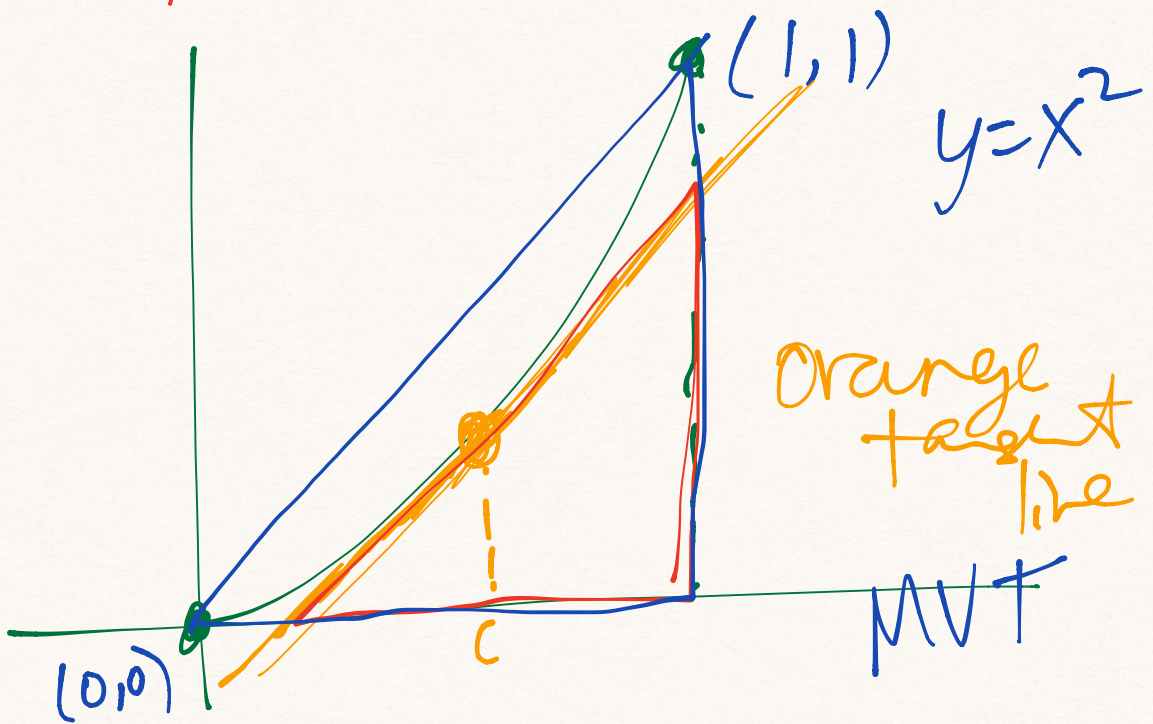
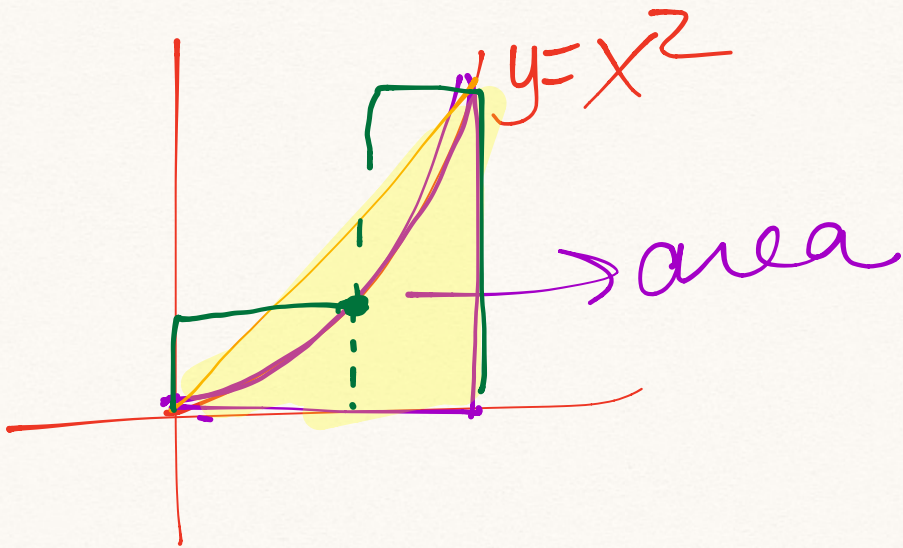


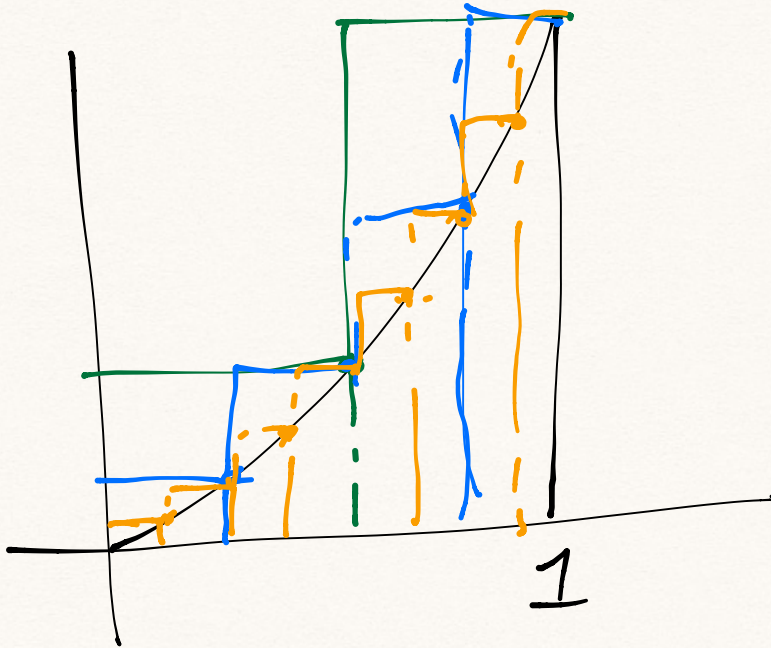
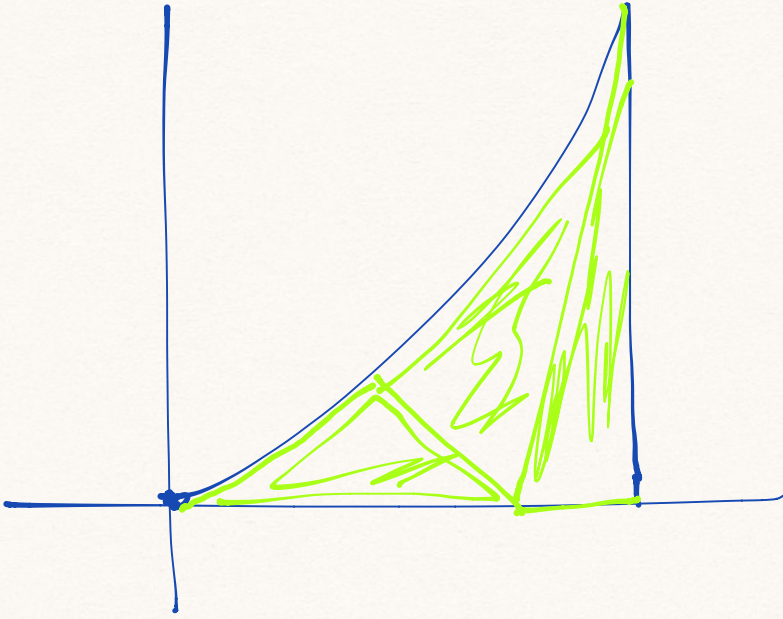
Better est. is
avg. lower + upper



"Do not
Disturb my
Circles."
—Archimedes







Est. area under curve
of $y = x^2$ from $x = 0$ to $x = 1$
using ten rectangles of
equal width.



HW-

Find the area between the following curves, the x-axis, and between the two x-values.

① $f(x) = 4x - 2$, $x = 1$, $x = 4$

② $f(x) = x^2 + x$, $x = 2$, $x = 4$

③ $f(x) = \sqrt{9 - x^2}$, $x = -3$, $x = 3$

Use at least 4 rectangles.