(1) [5] The following limit represents the area under the graph of a certain function $f(x)$ over a certain interval $[a, b]$. Determine $f(x)$ and $[a, b]$:

$$\lim_{n\to\infty} \sum_{i=1}^{n} \frac{\pi}{6n} \tan\left(\frac{i\pi}{6n}\right)$$

(2) [5] The population of a certain town is growing at a decreasing rate of $r(t)$ people per year. Using the following data for $r(t)$, give lower and upper estimates for the change in population over the time period $t = 0$ to $t = 8$. State units with your answer.

t (yrs)	0	2	4	6	8
$r(t)$ (people/yr)	100	75	50	36	10