1. Let $f(x) = 3x^2$. Use a Riemann sums with $n = 10$, $n = 50$ and $n = 100$ to approximate the area under the graph of $y = f(x)$ and above the x-axis on the intervals:

$$[0, 1], \qquad [0, 2], \qquad [0, 3], \qquad [0, 3.5]$$

   What is your guess for the area on the interval $[0, t]$?

2. Let $f(x) = 1$. Find the area of the region under the graph of $y = f(x)$ above the x-axis on the intervals

$$[0, 1], \qquad [0, 2], \qquad [0, 3], \qquad [0, 3.5]$$

   What is the area on the interval $[0, t]$?

3. Let $f(x) = 2x$. Find the area of the region under the graph of $y = f(x)$ above the x-axis on the intervals

$$[0, 1], \qquad [0, 2], \qquad [0, 3], \qquad [0, 3.5]$$

   What is the area on the interval $[0, t]$?