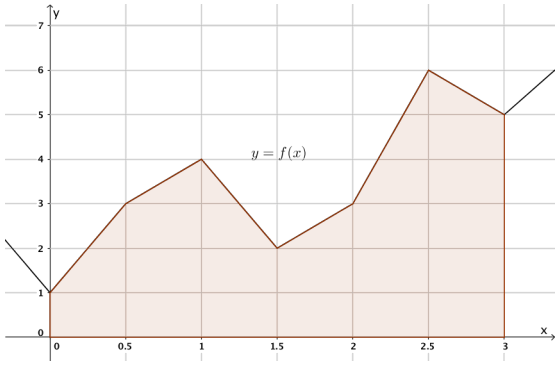
Quiz 1

The quiz is (typically) 1 or 2 pages for a total of 20 points. This quiz has two pages.

1. Evaluate. (6 pts.)

$$\int \left(\frac{1}{\sqrt{x}} - x\right)^2 \, dx$$

2. Use an upper sum estimate to approximate the area $\int_0^3 f(x)\, dx$, with $n = 6$ rectangles, shown in the figure below. (6 pts.)



3. Find the limit of the Riemann sum below using any method. (8 pts.)

$$\sum_{i=1}^{n} \frac{2}{n}\left(4\left(1+\frac{2i}{n}\right)^2-6\right)$$