Quiz 2

Name:_____

1. Let $f(x)$ be define by

$$f(x) = \begin{cases} \frac{x}{2} & x \le 4 \\ 2 & 4 < x \end{cases}$$

(a) Graph $y = f(x)$ on the interval $-2 \le x \le 6$

(b) Compute $\int_0^6 f(x)\,dx$.

(c) What is the average value of $f(x)$ on the interval $[-2, 6]$?

2. If you plan to approximate $\int_0^3 \sqrt{9 - t^2}\,dt$ accurate to 3 decimal places by dividing $[0, 3]$ into n equal pieces and using a left Riemann sum then how large do you have to take n?