Name:_____

Show all your work

(10) **Problem** Let $f(x) = \frac{1}{1+x^2}$ defined on the interval $[-2, 2]$. Approximate the integral $\int_{-2}^{2} f(x)dx$ by Trapezoid method T_4 with 4 equally spaced subintervals.

$$T_4 = \frac{1}{2}\left(\frac{1}{5} + 2\frac{1}{2} + 2 + 2\frac{1}{2} + \frac{1}{5}\right) = \frac{11}{5}$$