

Quiz #31

Name: Kex*You must show your work to get full credit.*

Oil leaks out of a tank at the rate of

$$r(t) = \frac{100 + t}{1 + t^2} \text{ gallons/hour.}$$

1. Write an integral that represents the amount of oil that leaked out of the tank during the first 2 hours.

$$\int_0^2 r(t) dt = \int_0^2 (100 + x)/(1 + x^2), x, 0, 2)$$

2. Evaluate this integral using your calculator.

111.519