

Name:

ID:

SR:

Question1: Find the linearization $L(x)$ of the function $f(x) = e^{-\sqrt{2x+1}}$ at $a = 0$.

Question2: Find the slope of the tangent line to the curve $y = \tanh^{-1}(\sqrt{x})$ when $x = \frac{1}{4}$.

Question3. The height and radius of a right circular cylinder are equal, so the volume is $V = \pi r^3$, where r radius is. If the radius is measured with a possible error of 1 *cm*. Find the maximum percentage error of the volume of the cylinder.