

Quiz #4 Math 101 Semester 041

Name:	I.D.	Sec.#
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1. Find the local linear approximation of $f(x) = \sqrt{x+1}$ at $x_0 = 0$ and use it to approximate $\sqrt{1.1}$.

2. A spherical snowball is melting at the rate of $4\pi \text{ cm}^3 / \text{sec}$. How fast is the radius changing when it is 5 cm. (10pts)

$$V = (4/3)\pi r^3$$