Math 2143 - Brief Calculus with Applications $_{\mathbf{Quiz}\ \#12}$ - 2008.03.24

| Name: | |
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1. Compute the following limit.

$$\lim_{x \to 0} \frac{x}{\sqrt{1+3x} - 1}$$

2. Compute the following derivative.

$$\frac{d}{dz} \left(4z^2 + \frac{3z^2 + 1}{4z^3 - \frac{1}{z}} \right)^3$$