1. Find the derivative of $f(x) = (\cot(x))^{399}$.

2.
$$\frac{\mathrm{d}}{\mathrm{d}x} \left[\sqrt{\frac{\sin x}{x}} \right] =$$

3. Let
$$f(x) = e^{\sqrt{\csc(x)}}$$
. Find $f'(x)$.

Name:MATH 200 - QUIZ 7 ImplifyInstructions: Show your work neatly. You do not need to simplify your answers.February 28, 2013

1. Find the derivative of $f(x) = \sec(6x^2 - x)$.

2. Let $f(x) = \sin(x)e^{x^2+1}$. Find f'(x).

3.
$$\frac{\mathrm{d}}{\mathrm{d}x} \left[\frac{\mathrm{x}}{\sqrt{\mathrm{cot}(\mathrm{x})}} \right] =$$

1. $\frac{\mathrm{d}}{\mathrm{d}x}\left[\sin\left(e^{5x}\right)\right] =$

2. Find the derivative of $f(x) = (67x + x^{-2})^{217}$.

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3. Let f(x) = \cos(x) \sin(\sqrt{x}). Find f'(x).
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1. Find the derivative of $f(x) = \csc(\pi^2 x)$.

2. Let $f(x) = e^{(16x^2 - 17x)}$. Find f'(x).

3.
$$\frac{\mathrm{d}}{\mathrm{d}x}\left[\frac{1}{\cos^2(3x)}\right] =$$