

Name: _____
AP Calc AB: More Chain Rule with Trig Functions Practice

Date: _____
Ms. Loughran

For each of the following find y' .

1. $y = 3 \cot^4 x$

2. $y = \csc x^3$

3. $y = \tan \sqrt[3]{x}$

4. $y = \sqrt{x} + \frac{1}{4} \sin(2x)^2$

5. $y = \tan^4(x^3)$

6. $y = \sqrt{3x - \sin^2(4x)}$

7. Given $y = \sin(3x^2)$. Find $\frac{d^2y}{dx^2}$.

8. (a) Find an equation of the tangent line to the graph of $f(x) = 2\sin x + \cos 2x$ when $x = \pi$.
- (b) Determine all values of x in $(0, 2\pi)$ at which the graph of f has a horizontal tangent.