

Name: _____
AP Calculus AB: More Trig Derivatives Homework

Date: _____
Ms. Loughran

In 1 – 12, find $\frac{dy}{dx}$.

1. $y = \tan(4x^2)$

2. $y = \cos^2(3\sqrt{x})$

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

4. $y = 4\cos^5 x$

5. $y = \csc(x^3)$

6. $y = \sin\left(\frac{1}{x^2}\right)$

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

8. $y = 2\sec^2(x^7)$

9. $y = \cos^3\left(\frac{x}{x+1}\right)$

10. $y = \sqrt{\cos(5x)}$

11. $y = x^2\sqrt{5-x^2}$

12. $y = \frac{(2x+3)^3}{(4x^2-1)^8}$

13. Given $y = x\cos(5x) - \sin^2 x$, find $\frac{d^2y}{dx^2}$.

14. Find an equation for the tangent line to the graph of $y = x\cos 3x$ at $x = \pi$.

Also p. 160 #s 72, 73