Math 166 Derivative Quiz A

Find the derivative of each function below (you do not have to simplify your answers to 1, 2 and 4)

1. $y = \left(\cos 3x + x^2\right)^8$

2. $y = \dfrac{\sin 2x}{3x + 5}$

3. $y = 3x^4\sqrt{5x+1}$

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

5. $y = \dfrac{5}{x} - \dfrac{x}{2} - x\sqrt{x} + \dfrac{4x}{\sqrt{x}}$

6. $y = \tan x$