

Math 16 HW – 074 & 075; **SHOW ALL WORK ON THIS PAPER**

1	Solve for x : $5^{2x+1} = 3$
2	Find $\frac{dy}{dx}$: $y = x^2 \ln(3x^4 + 2)$
3	Use log differentiation to find $\frac{dy}{dx}$: $y = \frac{(x^2+1)^4}{(x^4+2)^{10}}$
4	Find $\frac{dy}{dx}$: $y = (x^2 + 1)7^{5x}$
5	Find $\frac{dy}{dx}$: $y = x^2 \log_3(x^2 + 1)$
6	Find where the $y = x^2 \ln x$ ($x > 0$) has a horizontal tangent line.