

MATH 152
Mrs. Bonny Tighe

QUIZ 2A
7.3-7.4
25 points

NAME _____

Section _____ Wed 9/14/05

1. Differentiate.

a) $f(x) = \ln(\sin^4 x)$

b) $y = \ln\left(\frac{\sqrt{x+1}(\sec 3x)}{(2x-1)^4}\right)$

2. Find the exact value: a) $3^{3\log_3 2} =$ _____ b) $\log_2 22 - \log_2 11 =$ _____

3. Solve for x.

a) $\log_5(2-2x) = 2$

b) $4e^{2x-1} = 2$

c) $2e^{2x} + e^x - 3 = 0$

4. Find an equation of the tangent line to the curve $y = \log_2 x^3$ at the point (2,3)

5. Evaluate:

a) $\int_0^2 \frac{x^2}{3+x^3} dx = \underline{\hspace{2cm}}$

b) $\int \frac{(\ln x)}{x} dx = \underline{\hspace{2cm}}$

c) $\int \frac{2^{3x}}{3-2^{3x}} dx = \underline{\hspace{2cm}}$

d) $\int \frac{e^{\sqrt{x}}}{\sqrt{x}} dx = \underline{\hspace{2cm}}$

6. Use logarithmic differentiation to find the derivative of a) $y = x^{\cos 3x}$

b) $y = \sqrt{\frac{2x-1}{\sin x}}$