

Name:

Section: 5 6 9 10

1. Differentiate the following functions. You do not need to simplify :)

(a) $f(x) = \tan(\ln x) + \ln(2x^3 - 9x)$.

(b) $s(x) = e^{2x-1} + e^{x \ln 3}$.

(c) $g(x) = (\tan x)^{\cot x}$

2. Evaluate the integrals

(a) $\int \frac{3x^3}{x^4 + 3} dx$

(b) $\int \sin x e^{\cos x} dx$