

Name:

Section: 11 12 13

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

(a) $f(x) = \tan(\ln x) + \ln(5x^{3/2} - 1)$

(b) $s(t) = e^{3t+2} + e^{t \ln 2}$

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

2. Evaluate the integrals

(a) $\int \frac{3x}{x^2 + 6} dx$

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