

Advanced Calculus

Take-Home (10/4/07)

Your Name:

This is a graded assignment – *you must work individually*. However, you may use your book and your notes.

Differentiate the function.

1. $f(x) = 100 - x$

2. $g(x) = -\frac{3}{2}x^2 + 4\sqrt{x} + 18$

3. $p(t) = 47(8t - t^{-1/5})$

4. $s(n) = 3e^n + n^a$

5. $p(x) = \frac{e^x + x}{1 - x^5}$

6. $y = (3x)5^x$

7. $f(x) = (8x^2 - 3x^{-3})(2x - 1)$

8. $r(s) = \frac{2}{s^{2/3}}$

9. $f(x) = e^x(x^2 + 1)$

10. $h(t) = \frac{4t-1}{2t^2}$