Calculus Homework Week 8
Due Monday 7 November 2005
Mr. Quinn

ON ANOTHER SHEET OF PAPER find the derivative of each of these functions, and evaluate them for the indicated value of x (where there is one).

1. $f(x) = (x+1)^{10}$ for x = 1.
2. $f(x) = 8\sqrt{(x^4 - 4x^2)}$ for x = 0.
3. $f(x) = \left(\frac{x}{x^2+1}\right)^3$ for x = -1.
4. $f(x) = \sqrt{\frac{2x-5}{5x+2}}$ for x = 2.
5. $f(x) = \left(x - \sqrt{x}\right)^4$ for x = 6.
6. $f(x) = \sqrt{x^4 + x^2}$ for x = 0.
7. $f(x) = \left(\frac{1}{x-1}\right)^5 + 4$ for x = 5.
8. $f(x) = 6(2x^4 - 11x + 11)^2$ for x = 1.
9. $f(x) = (3x^5 + 2x - 16\sqrt{x})^{200}$
10. $f(x) = \frac{\sqrt{11x + 3x^2}}{5x+7}$ for x = -3.
11. $f(x) = 3x\sin x$
12. $f(x) = 7x^2 \cos x - 11x^4$
13. $f(x) = 2x^2 - 11x\sin x$
14. $f(x) = \sin(2x + x^2)$
15. $f(x) = 5x^3 \sin\left(-x + \frac{6}{x^2}\right)$
16. $f(x) = x^2 \sin x + 2x\cos(x-1)$
17. $f(x) = (\sin x)^{20}$
18. $f(x) = 2x^7 - \frac{6}{x} + 2x\sin x$
19. $f(x) = \frac{2x - x^7}{\sin x}$
20. $f(x) = \left(\frac{1}{3x^2 \sin x}\right)$
21. $f(x) = -\cos(6x^3 + x)$
22. $f(x) = \frac{2x - \sin x}{\cos x}$
23. $f(x) = \tan(1 - 4x)$
24. $f(x) = (x+1)^{10}\sin(2x)$
25. $f(x) = \sin x \cos x$