

Extra point problems for the 2nd exam in **Math 151:04**. No calculators, formula sheets, or notes of any kind are allowed. Grading will primarily depend on the answers.

Name _____

11/20/2003

Problem 1 (5 points) If $f(1) = 3$ and $f'(1) = 7$, then $f(1.05)$ is approximately

Answer _____

Problem 2 (5 points) If $f(x) = 7x\sqrt{x^2 + 3}$, then $f''(x)$, the second derivative of f , is

Answer _____

Problem 3 (5 points) If the sum of two non-negative numbers is A , the largest that the product of the cube of one number multiplied by the other could be is

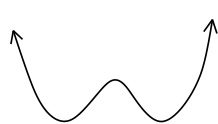
Answer _____

OVER

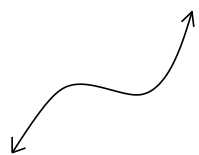
Problem 4 (5 points) For which values of x are the tangent lines to $y = 5x^2$ and $y = x - x^2$ parallel?

Answer _____

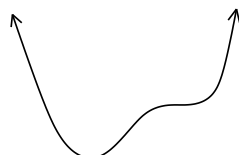
Problem 5 (5 points) The graph of $f(x) = x^4 + x^3$ looks like



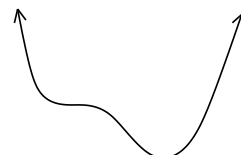
a)



b)



c)



d)

None of these.

e)

Answer _____ because

Problem 6 (5 points) Compute $\frac{dy}{dx}$ if $xy^4 - 3y = 5x^2$.

Answer _____