QUIZ 6
Math 220-51

NetID: November 12, 2009
(Please don't put your name!)

Question 1. *(18pts) Let*

$$f(x) = x^4 - 8x^3.$$

(a) Find all the relevant information about this curve: **domain, intervals of I/D, local max./min., concavity and inflection points, intercepts**. *Just as in the example in class, there are no asymptotes! There's also no symmetry!*

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(b) Sketch the graph! Make sure you indicate the special points you found in (a).

Question 2. *(7pts) A car travelled 150 miles in 6 hours. Use the <u>Mean Value Theorem</u> to show that at some point the speedometer read 25 mph.*

(Hint: let $s(t)$ be the displacement of the car at time t.)