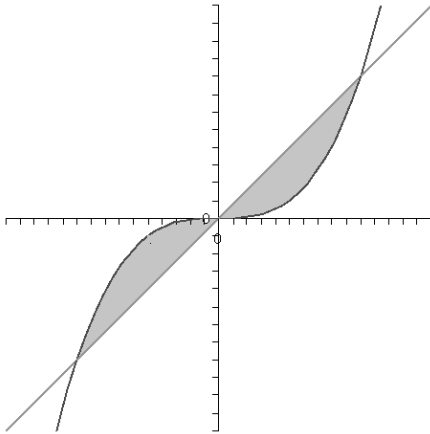


Your name: _____

Quiz no. 7 (1100-1 Quantitative Analysis,
Spring 2008)
April 11, 2008

30 min. No symbolic calculators allowed (TI-89 and similar)!
(TI-86 or lower are allowed.) Show all work.

1. (9 points) Compute the area between the graphs of $y = x^3$ and $y = 4x$ as shown in the figure.



2. (7 points) A rich donor offers the University of Utah either an endowment (paid immediately) of 100,000 \$, or a continuous payment at an annual rate of 12,000 \$ over the next 10 years. Which offer should the university accept? Assume a continuously compounded interest rate of 6%. *Hint: compute the present value of the second option, and compare it with the offer of 100,000 \$. You don't need to compute any integral for the first offer!*

3. (9 points) The supply function of a product is given by $p = 1 + \frac{x}{2}$, and the demand function by $p = \frac{8}{x+2}$ (where p is the price in dollars, and x the quantity in thousands of units).

- (a) Find the equilibrium price and quantity.
- (b) Compute the producer's surplus at the equilibrium.