Math 120C Autumn, 2001

## Quiz Five

No notes. No calculators.
Simplify your answers. Show your work. Please put a box around YOUR FINAL ANSWER. There are 15 points on this quiz.

1 (3 points) Solve for $x$ if $\log _{3}\left(x^{2}-x\right)=1$. Please give exact answers.

2 (4 points) Rewrite the function $y=12\left(8^{-1+t / 3}\right)$ in the form $y=A_{0} e^{a t}$ for appropriate constants $A_{0}$ and $a$.

3 (4 points) The town of Oakdale, Wisconsin is experiencing a population boom. In 1995, the population was 750 , and four years later it was 950 . Find an exponential model $p(x)$ for the population of Oakdale in year $1995+x$.

4 (4 points) A bank offers an account with $4 \%$ annual interest, compounded continuously. How long will it take the principal in such an account to triple in value? (Leave your answer in exact form.)

