TECHNICAL CALCULUS II
Spring 1998
Exam 3

Name _____

(20) 1. $\displaystyle\int \frac{x^2+x+5}{(x+1)(x^2+4)}\,dx$

(15) 2. Find the area bounded by $y=\frac{1}{x}$, $y=0$ and $x=1$ (to the right of $x=1$).

(15) 3. Find the first three nonzero terms of the Maclaurin series for $f(x)=\ln(1-x)$.

(15) 4. Calculate with accuracy 0.1: $\displaystyle\int_0^1 \sin(x^2)\,dx$.

(15) 5. Calculate with accuracy 0.1 (not using a calculator): $\sqrt{17}$.

(20) 6. Write the Taylor's series for $\cos x$ around $a=\dfrac{\pi}{3}$.