Math 125 B **Quiz 2** (20 minutes) Thursday, January 17, 2002

Name _____ **Student number** _____ **Quiz section:** _____

1 : a) (3pts) Find the general antiderivative of $\frac{2}{x} - 3\sin x + \frac{4}{1+x^2}$.

b) (5pts) Evaluate $\int_1^4 (\sqrt{x} - \frac{1}{\sqrt{x}})dx$.

2 : (6pts) Use the "midpoint rule" with n=4 to approximate $\int_2^6 \sqrt{x}dx$. DO NOT USE DECIMALS, AND DO NOT SIMPLIFY ANY EXPRESSIONS (leave something like $\frac{1}{2}\frac{1}{2} + \frac{1}{3}\sqrt{1}$ in exactly this form and do not simplify this to 7/12 or to .25 + .33.)

3 : (6 pts) Find the derivative of the function

$$f(x) = \int_0^{x^2} \cos t \; dt.$$