

## MATH 175 – Section 004 – Quiz 1

You may work with other class members on this quiz, but you may *not* receive assistance from people not in MATH 175 (Section 004). You must show all of your work to receive full credit. Do all your work on other sheets of paper and be sure to staple all the pieces of paper together or YOU WILL GET A 'ZERO' ON THE QUIZ. Do not use decimal approximations unless asked to do so. Your work on this quiz must be handed in by Tuesday, 2 September 2003 at 1:40 p.m. GOOD LUCK!

1) Evaluate:

a)  $\int \sqrt{2 - 3x} \, dx$

b)  $\int_{\pi/6}^{\pi/3} \tan^2 x \sec^2 x \, dx$

c)  $\int \frac{\cos \sqrt{x}}{\sqrt{x}} \, dx$

d)  $\int \frac{\cos x}{1 - 2 \sin x} \, dx$

2a) Find the area bounded by  $y = \sqrt{x}$  and  $y = x^2$ .

2b) Find the area bounded on the left by the  $y$ -axis, from below by  $y = \sin x$  and from above by  $y = \cos x$ .

2c) Find the area bounded by  $y = \cos x$  and  $y = 1 - \frac{2}{\pi}x$ .

2d) Find the area in the second quadrant bounded by  $y = x^2$ ,  $y = 1$ , and  $y = x + 6$ .