Math 143
Quiz 5 **Name:**_____
Due: 04/02/2007

This is a Take-Home Quiz. You may use your book and course notes, and you may consult with other members of the class, but you may not consult with outside tutors (at least not on these specific problems).

1. Find the exact value of the following expressions:

   (a) (1.5 points) $\sin[\cos^{-1}(-\frac{\sqrt{3}}{2})]$

   (b) (1.5 points) $\cos^{-1}[\cos(-\frac{\pi}{6})]$

   (c) (2 points) $\cos[\arcsin(-\frac{4}{5}) + \arctan(\frac{12}{5})]$

2. (3 points) Use inverse trig functions to find all solutions to the equation $3\sin^2 x + 7\sin x + 3$ on the interval $[0, 2\pi)$

3. (3 points each) Solve $\triangle ABC$ with the given information using either the Law of Sines, of the Law of Cosines:

(a) $b = 40$, $\alpha = 50°$, $\gamma = 75°$

(b) $a = 30$, $c = 50$, $\alpha = 20°$

(c) $a = 30$, $c = 50$, $\beta = 20°$

(d) $a = 30$, $b = 50$, $c = 25$