03/15/2001 **NAME:**

MATH 1151 QUIZ-8 (10 minutes)

1. (6 points) Solve $2\cos^2\theta + \cos\theta - 1 = 0$ on the interval $0 \leq \theta < 2\pi$.

Solution: This is a quadratic equation in $\cos\theta$. So by using quadratic root formula we see that the roots are $\cos\theta = \frac{1}{2}$ and $\cos\theta = -1$. From first relation we get the roots as $\theta = \frac{\pi}{3}, \theta = \frac{5\pi}{3}$, from the second equation we get $\theta = \pi$.**Q.E.D.**

2.(4 points) Solve the triangle $\alpha = 50^o, \gamma = 20^o, a = 3$.

Solution: From Sinus Law $\frac{\sin 50^o}{3} = \frac{\sin 20^o}{c}$. So $c = \frac{3\sin 20^o}{\sin 50^o}$, also $\beta = 180^o - 50^o - 20^o = 110^o$, so by using again Sinus Law we get that $b = \frac{3\sin 110^o}{\sin 50^o}$.**Q.E.D.**