

## Math 301-121      Quiz 3 (A)

Name:.....Sec#:.....ID#:.....Ser#:.....

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**Q.1:** Show that the functions  $f_1(x) = 2x$  and  $f_2(x) = \cos 2x$  are orthogonal on  $[-\frac{\pi}{2}, \frac{\pi}{2}]$ . Also find norm of each function.

**Q.2:** Find Half-Range Fourier series of  $f(x) = x + 1$ ,  $0 < x < 1$ .