

## Attendance Quiz for Lecture 7

**NAME:** (print!) \_\_\_\_\_ **Section:** \_\_\_\_\_

**E-MAIL ADDRESS:** (print!) \_\_\_\_\_

1. Show that the given functions are orthogonal on the given interval.

$$f_1(x) = \sin x \quad , \quad f_2(x) = \cos x \quad , \quad [0, \pi] \quad .$$

2. Verify by direct integration that the functions are orthogonal with respect to the indicated weight function on the given interval

$$f(x) = x - 3 \quad , \quad g(x) = x^2 \quad , \quad w(x) = e^{-x} \quad , [0, \infty) \quad .$$