Math 54, Quiz 7 Section 101 GSI Carter

Name:

1. Find the line which best fits the data $(0, 0)$, $(1, 2)$, and $(2, 3)$ in the least squares sense.

2. Apply Gram-Schmidt to the polynomials $f_1 = 1$, $f_2 = x - 1$, and $f_3 = (x-1)^2$ using the inner product

$$\langle f, g \rangle = f(-1)g(-1) + f(0)g(0) + f(1)g(1).$$