

## Warm-up Problems - March 20, 2006

1. For the functions below, find the equation of the tangent line at the point.

(a)  $f(x) = e^x, x = 0$

(b)  $f(x) = e^{2x}, x = 0$

(c)  $f(x) = e^x, x = 1$

(d)  $f(x) = e^{2x}, x = 1$

## Lecture Problems

2. Find the first 4 Taylor polynomials  $(p_0, p_1, p_2, p_3)$  for the functions given.

(a)  $f(x) = e^{-x}$ , at  $x = 0$

(b)  $f(x) = -1 + 2x - 3x^2 + 4x^3 + 7x^4$ , at  $x = 0$