3. $f(x) = x + x^2 \quad x_0 = 3$

$f'(x) = 1 + 2x$

$f(x_0) = f(3) = 3 + 3^2 = 12$

$f'(x_0) = f'(3) = 1 + 2 \times 3 = 7$

$y = f'(x_0)(x - x_0) + f(x_0)$

Donc $y = 7(x-3) + 12 = 7x - 21 + 12 = 7x - 9$

$$y = 7x - 9$$