

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

$$f'(x) = -2xe^{1-x^2}, f'(1) = -2;$$

$$f''(x) = (4x^2 - 2)e^{1-x^2}, f''(1) = 2;$$

$$f'''(x) = (-8x^3 + 12x)e^{1-x^2}, f'''(1) = 4.$$

the first four terms in the Taylor series are: $1 - 2(x - 1) + (x - 1)^2 + 2(x - 1)^3/3$.

