Punto 1

$$P_n(x) = \sum_{\substack{i=0 \\ i\neq j}}^{n-1} f(x_i) L_i(x)$$

$$L_i(x) = \prod_{\substack{i=0 \\ j\neq i}}^{n-1} \frac{x - x_i}{x_i - x_j}$$

Polinomio interpolador para Ω =

$$P_\Omega(x) = f(x_0)\left(\frac{(x-x_1)\,(x-x_2)}{(x_0-x_1)\,(x_0-x_2)}\right) + f(x_1)\left(\frac{(x-x_0)\,(x-x_2)}{(x_1-x_0)\,(x_1-x_2)}\right)$$

$$+ f(x_2)\left(\frac{(x-x_0)\,(x-x_1)}{(x_2-x_0)\,(x_2-x_1)}\right)$$

Derivada para $P_\Omega(x)$ =

$$P_\Omega(x) = f(x_0)\left(\frac{x^2 - x_2 x - x_1 x + x_2 x_1}{x_0^2 - x_2 x_0 - x_1 x_0 + x_2 x_1}\right) + f(x_1)\left(\frac{x^2 - x_2 x - x x_0 + x_2 x_0}{x_1 x_0 - x_2 x_1 - x_0^2 + x_2 x_0}\right)$$

$$+ f(x_2)\left(\frac{x^2 - x_0 x - x_1 x + x_1 x_0}{x_2^2 - x_0 x_2 - x_1 x_2 + x_1 x_0}\right)$$

$$P'_{\Omega_2}(x) = f(x_0)\left(\frac{2x - x_2 - x_1}{x_0^2 - x_2x_0 - x_1x_0 + x_2x_1}\right) + f(x_1)\left(\frac{2x - x_2 - x_1}{x_1x_0 - x_2x_1 - x_0^2 + x_0x_2}\right)$$

$$+ f(x_2)\left(\frac{2x - x_0 - x_1}{x_1^2 - x_0x_2 - x_1x_2 + x_1x_0}\right)$$

Punto e:

$$\frac{\partial\left((\tan(x))^{1/2}\right)}{\partial x} = \frac{\sec^2(x)}{2\sqrt{\tan(x)}}$$

$$\hookrightarrow \frac{1}{2}(\tan(x))^{-1/2} \cdot \frac{\partial(\tan(x))}{\partial x} = \frac{\sec^2(x)}{2\sqrt{\tan(x)}}$$