

Punto 8.A

$$P(x) = F(x_0) \cdot \frac{(x-x_1)(x-x_2)}{(x_0-x_1)(x_0-x_2)} + F(x_1) \frac{(x-x_0)(x-x_2)}{(x_1-x_0)(x_1-x_2)} + F(x_2) \frac{(x-x_0)(x-x_1)}{(x_2-x_0)(x_2-x_1)}$$

Término

$$F(x_0) \cdot \frac{(x-(x_0+h))(x-(x_0+zh))}{(x_0-(x_0+h))(x_0-(x_0+zh))} + F(x_0+h) \frac{(x-x_0)(x-(x_0+zh))}{(x_0+h-x_0)(x_0+h-(x_0+zh))}$$

$$+ F(x_0+zh) \cdot \frac{(x-(x_0+h))(x-x_0)}{(x_0+zh-(x_0+h))(x_0+zh-(x_0))}$$

$$= \frac{F(x_0) \cdot (x - x_0 - h)(x - x_0 - zh)}{zh^2} + \frac{F(x_0 + h) \cdot (x - x_0)(x - x_0 - zh)}{h^2} +$$

$$\frac{F(x_0 + zh) \cdot (x - x_0 + h)(x - x_0)}{zh^2}$$

$$= \frac{F(x_0)}{zh^2} \cdot [(x - x_0) - zh(x - x_0) + zh^2] + \frac{F(x_0 + h)}{h^2} [(x - x_0)^2 - zh(x - x_0)]$$

$$+ \frac{F(x_0 + zh)}{zh^2} [(x - x_0)^2 - h(x - x_0)] = P_1(x) + P_2(x) + P_3(x)$$