5) $P_{0,1}(x) = 2x+1 \Rightarrow F(0) = P_{0,1}(0) = \underline{1} \quad \wedge \quad \underline{F(1) = P_{0,1}(1) = 3}$

$P_{0,2}(x) = x+1 \Rightarrow \quad F(0) = P_{0,2}(0) = 1 \quad \wedge \quad \underline{F(2) = P_{0,2}(2) = 3}$

$P_{1,2,3}(2.5) = 3 \Rightarrow \quad L_1(2.5)F(1) + L_2(2.5)F(2) + L_3(2.5)F(3) = 3$

def. pol.
Lagrange

$\Rightarrow \dfrac{(2.5-2)(2.5-3)}{(1-2)(1-3)} \cdot 3 + \dfrac{(2.5-1)(2.5-3)}{(2-1)(2-3)} \cdot 3 + \dfrac{(2.5-1) \cdot (2.5-2)}{(3-1) \cdot (3-2)} F(3) = 3$

$\Rightarrow \quad -0.375 + 2.25 + 0.375 \, F(3) = 3 \Rightarrow 0.375 \, F(3) = 1.125 \Rightarrow \underline{F(3) = 3}$

Utilizo estos datos para calcular $P_{0,1,2,3}(2.5)$

$P_{0,1,2,3}(2.5) = L_0(2.5) \cdot F(0) + L_1(2.5) \cdot F(1) + L_2(2.5) \cdot F(2) + L_3(2.5)F(3)$

$= \dfrac{(2.5-1)(2.5-2)(2.5-3)}{(-1)(-2)(-3)} \cdot 1 + \dfrac{(2.5-0)(2.5-2)(2.5-3)}{1 \cdot (1-2)(1-3)} \cdot 3 + \dfrac{(2.5-0)(2.5-1)(2.5-3)}{2 \cdot (2-1) \cdot (2-3)} \cdot 3 + \dfrac{(2.5)(2.5-1)(2.5-2)}{3 \cdot (3-1)(3-2)} \cdot 3$

$= \dfrac{-0.375}{-6} + \dfrac{-0.625}{2} \cdot 3 + \dfrac{-1.875}{-2} \cdot 3 + \dfrac{4.5}{6} \cdot 3 = 0.0625 - 0.9375 + 2.8125 + 0.9375$

$= \underline{2.875}$