

① $f(0)=1, f(2)=9, f(4)=41, f(6)=41$

Zakładamy $f''(0)=0, f''(6)=-12$.

$$p_0(x) = 1 + x^3$$

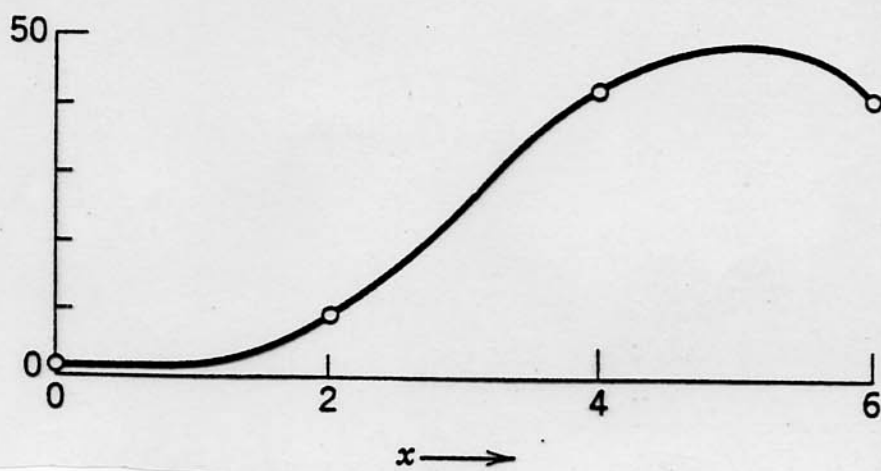
$$(0 \leq x \leq 2)$$

$$p_1(x) = 9 + 12(x-2) + 6(x-2)^2 - 2(x-2)^3 = 25 - 36x + 18x^2 - 2x^3$$

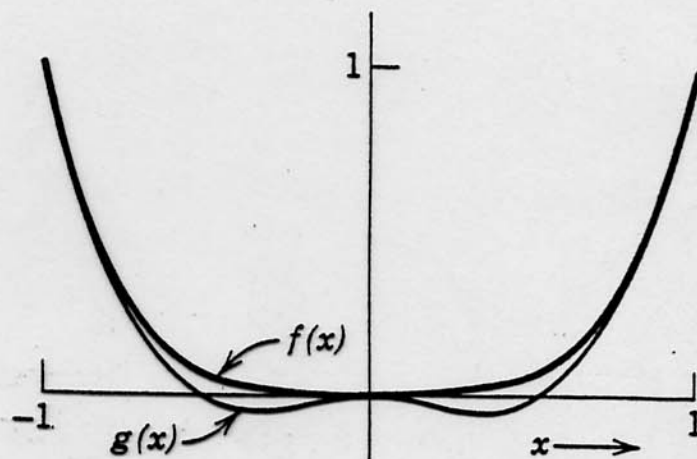
$$(2 \leq x \leq 4)$$

$$p_2(x) = 41 + 12(x-4) - 6(x-4)^2 = -103 + 60x - 6x^2$$

$$(4 \leq x \leq 6)$$



② $f(x) = x^4, x \in [-1, 1]$



$$g(x) = \begin{cases} -x^2 - 2x^3 & \text{if } -1 \leq x \leq 0 \\ -x^2 + 2x^3 & \text{if } 0 \leq x \leq 1. \end{cases}$$