

Soluzioni degli esercizi del cap. 5

Esercizio 1

$$P_3(X) = -0.167(x-1)(x-2)(x-3) - 0.25x(x-1)(x-3) + 0.167x(x-1)(x-2)$$

$$f(0.5) \approx -2.125$$

$$f(1.5) \approx 4.375$$

$$f(2.5) \approx 7.875$$

Esercizio 2

$$P_3(x) = 0.0625 + 0.25(x-0.25) - 0.7266(x-0.25)(x-0.5) + 10.7112(x-0.5)(x-0.25)(x-0.85)$$

$$f(0.75) \approx 0.19435$$

$$h = 0.25$$

$$F_\Delta(h) = 1.1 \quad F_\delta(h) = 0.6052$$

Esercizio 3

$$P_3(x) = 1.3784 + 0.3535(x-0.9) - 0.04(x-0.9)(x-1.1) + 4.167 * 10^{-3}(x-0.9)(x-1.1)(x-1.3)$$

$$f(1) \approx 1.414162$$

$$f(1.4) \approx 1.54977$$

$$h = 0.2 \quad F_\delta(h) = 0.16875$$

Esercizio 4

$$q_3(x) = -6.27(1.5-x)^3 + 23.18(x-1.5)^3 - 0.8675(x-1.5) + 1.63128$$

$$q_3(x) = 1.6005$$

Esercizio 5

$$P_3(x) = 0.9933 - 0.09895(x-0.2) - 0.158(x-0.2)(x-0.4) + 0.16(x-0.2)(x-0.4)(x-0.6)$$

$$f(0.7) \approx 0.9321$$

$$f'(0.6) \approx -0.3858$$

Esercizio 6

$$P_3(x) = 0.230 - 0.0038(x-10) + 0.38 * 10^{-3}(x-10)(x-50) - 0.14 * 10^{-5}(x-10)(x-50)(x-90)$$

$$f(125) \approx -0.3016$$