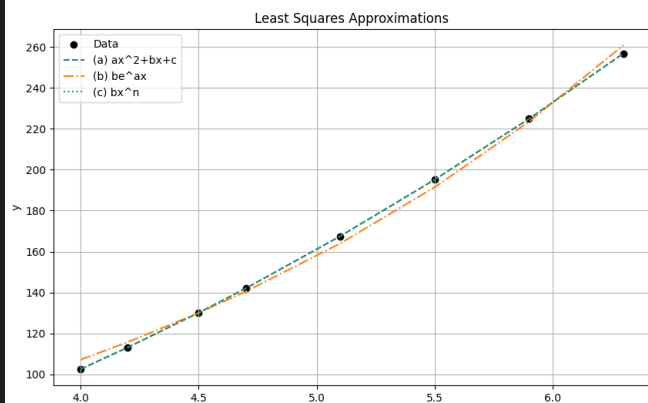


(1)

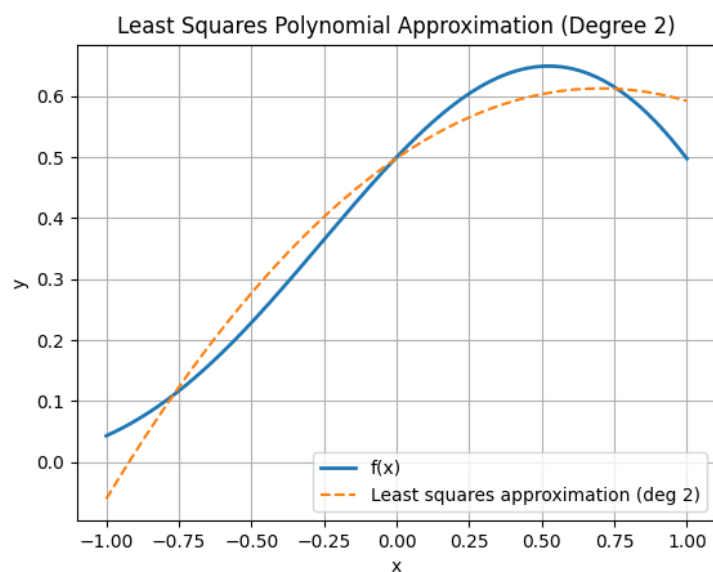
(a) $a x^2 + b x + c$ approximation
 $a = 6.6912$, $b = -1.8837$, $c = 3.0864$
(SSE): 0.00525

(b) $y = b * e^{(a * x)}$
 $a = 0.3867$, $b = 22.8245$
(SSE): 74.36079

(c) $y = b * x^n$
 $b = 6.2335$, $n = 2.0202$
(SSE): 0.01027



(2)



(3)

(b) $\int_0^1 S_4(x) dx \approx 0.19767220$
(c) $\int_0^1 x^2 \sin(x) dx = 0.22324428$
Difference = 0.02557208
(d) RMS Error $E(S_4) \approx 0.11926297$

