

8
6

$$\int_0^\infty f(x) e^{-x} dx \approx C_1 f(x_1) + C_2 f(x_2)$$

THEN WE

IS XCT FOR ALL POLY DEG ≤ 3

SO NOW
DERIVE:

$$C_1 = \frac{x_2}{4}$$

$$C_2 = \frac{x_1}{4}$$

ASSUME $f(x) = x^3$
A GOOD REPRESENTATION
OF POLY OF DEG ≤ 3

$$\int_0^\infty x^3 \cdot e^{-x} dx = C_1 f(x_1) + C_2 f(x_2)$$

$$= C_1 x_1^3 + C_2 x_2^3$$

(MAY NOT BE
NECESSARILY
FOR CORRECT)

$$(2) \sum_{j=1}^n C_j f(x_j)$$

$$= C_1 f(x_1) + C_2 f(x_2)$$

... HUM

$$L_1 = \frac{6 - C_2 x_2^3}{x_1^2} \dots \text{NEXT SLIDE}$$