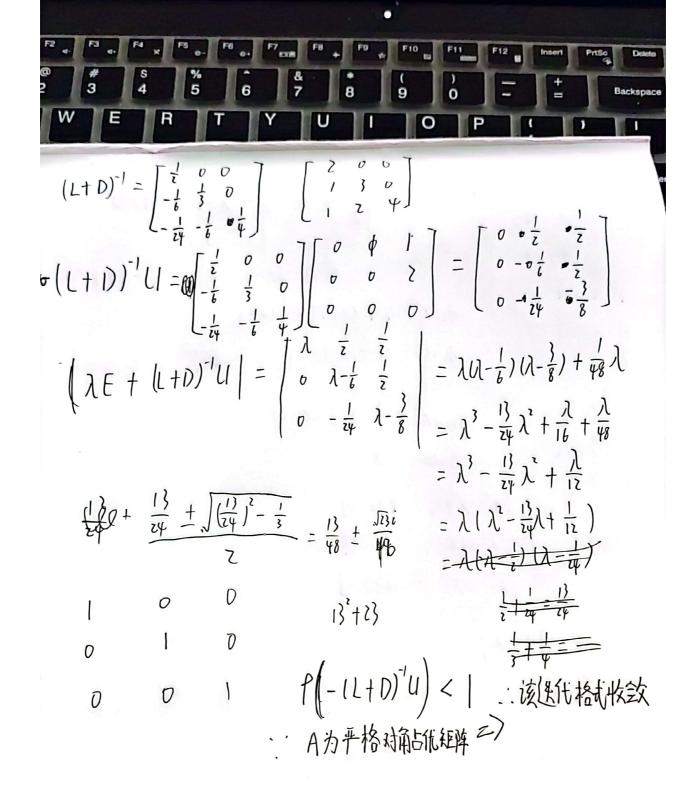
: X:0722 - 4=2641为有效数字 1>  $e(x) \le \frac{1}{2} \times |o^{-3}| = e(y) \le \frac{1}{2} \times |o^{-3}|$  $e_{r(x)} = \frac{e(x)}{x} \le 6.925 \times 10^{-4}$   $e_{r}(y) = \frac{e(y)}{y} \le 1.893 \times 10^{-4}$ erif) = of enx) x + of eriy) y = 1ey-4x) x  $e(f) = \frac{\partial f}{\partial x} e(x) + \frac{\partial f}{\partial y} e(y) = (e^y - 4x)e^x - + (xe^y) e(y)$ = (e241-4x0.722)x = x|0-3+ (0.722 x e2641 x = x|0-3 = 0 0 106 = 0.1 x|0-1 eafo f (x,y) = 0.721 × e2.641 - 2 x 0.721 = 9.085 er(f) < 1.16 Tx10-3 具有两位有效数字 2 > fix)=8x3-2x2 -5  $f(x) = \{x' - 4x = x \} x (x - \frac{4}{7})$ · f(x)在(-∞,0),(+,+∞)」避雷点在(0,至)逐城 :: f(0)=-5 < 0 : f(x)=0仅有-个实根  $\chi = \sqrt[3]{1\chi'+5} = P(x)$   $\chi_{k+1} = \sqrt[3]{1\chi_k'+5}$ ·· f(1)=-5 f(3)=4 写根位于(2,3) 取初始值为 10 70.=2.5 X1 ≈ 2.5962 N1 ≈ 2.6439 X3≈ 2.6675 x4 = 2.6792 x5 = 2.6850 X6 = 2.6878 X1 = 2.6892 X1=2.6899 x9 = 2.690} x10 = 2.6904 · | x10-x9 | = 0.1x10-3 ≤ 0.5 x10-3 ... Et xx = x6=2.6904 y(x)= 1/(1x+1) 显然y(x)在(2,3)上恒1子1 又 · (2) =1.351 y(3)=2.844 : 当 x 6[2,3]时, y以) 6[2,3] Y(x)为增函数 · 迭代格式在选定区间(2,3)上收敛



$$T > \frac{f(x)-1}{f} \int_{-1}^{1} 1 dx = 2 = A + B + C$$

$$f(x)=x \int_{-1}^{1} x dx = 0 = -A + C + D + E$$

$$f(x)=x^{2} \int_{-1}^{1} x^{2} dx = \frac{1}{3} = A + C - 2D + 2E$$

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8 > 
$$k_1 = y(x_1)$$
  $k_2 = f(x_1 + \beta h, y(x_1) + \beta h, y(x_2))$ 

$$= f(x_1, y(x_1) + \frac{\partial f(x_1, y(x_1))}{\partial x} \beta h + \frac{\partial f(x_1, y(x_1))}{\partial y} \beta h y(x_1) / \triangleq \beta h, y'(x_1)$$

$$+ \frac{1}{2} \left( \frac{\partial f}{\partial x^2} \beta^2 h^2 + \frac{\partial f}{\partial x \partial y} \beta^2 h^2 y'(x_1) + \frac{\partial f}{\partial y^2} \beta^2 h^2 y'(x_1) \right) + O(h^2)$$

$$= y(x_1) - \frac{\partial f}{\partial x} y'(x_1) + \frac{\partial f}{\partial x} y'(x_1) + \frac{\partial f}{\partial y} y'$$