

$$7. \frac{0.5}{542} \approx 0.09\%$$

$$8. \quad 2\text{位} \quad 2\text{位} \quad 4\text{位}$$

$$\frac{0.05}{2.7} = 1.85\%$$

$$\frac{0.05}{2.71} = 1.85\%$$

$$\frac{0.0005}{2.718} = 0.0184\%$$

$$9. \quad \varepsilon_1 = 0.005 \quad \varepsilon_{r1} = \frac{\varepsilon_1}{|x_1|} < \frac{0.005}{2.72} \approx 1.84 \times 10^{-3}$$

$$\varepsilon_2 = 0.000005 \quad \varepsilon_{r2} = \frac{\varepsilon_2}{x_2} < \frac{0.000005}{2.71828} \approx 1.84 \times 10^{-6}$$

$$\varepsilon_3 = 0.00005 \quad \varepsilon_{r3} = \frac{\varepsilon_3}{x_3} < \frac{0.00005}{0.718} \approx 6.96 \times 10^{-4}$$

$$10. \quad x_1 = 0.142 \times 10^1 \quad m-n = 3 \quad 3\text{位}$$

$$x_2 = -0.184 \times 10^{-1} \quad m-n = 1 \quad 1\text{位}$$

$$x_3 = 0.184 \times 10^{-1} \quad m-n = 1 \quad 1\text{位}$$

$$11. \quad x_1^* = \frac{22}{7} \approx 3.14285714 \dots$$

$$|x_1^* - \pi| = 0.00126 \dots < 0.005 = \frac{1}{2} \times 10^{-2} \quad 3\text{位}$$

$$x_2^* = \frac{355}{113} \approx 3.1415929203 \dots$$

$$|x_2^* - \pi| \approx 2.67 \times 10^{-7} < 0.5 \times 10^{-6} \quad 7\text{位}$$

年 月 日

第 页