

$$\underline{3b} \quad T(n) = \int_0^{2\pi} e^{-x} \sin x \, dx = \frac{2\pi h^2}{12} f''(q) \leq 10^{-4}$$

$$\frac{2\pi h^2}{12} f''(q) = 10^{-4}$$

$$\frac{2\pi(\frac{2\pi}{n})^2}{12} f''(q) = 10^{-4}$$

$$\frac{8\pi^2}{12n^2} f''(q) = 10^{-4}$$

$$n = \sqrt{\frac{8\pi^2}{12 \cdot 10^{-4}} f''(q)}$$

$$n = \sqrt{-\frac{8\pi^2}{12 \cdot 10^{-4}} 2e^{-\frac{2}{3}} \cos(q)}$$

$$\underline{E} = 0$$

$$n \approx 362.76$$

$$\hat{n} = 363$$

$$f(x_0) \rightarrow f(x_n)$$

$$\hat{n} + 1 = 364 \text{ FUNCTION}$$

EVALUATIONS