tisdag 27 december 2022 14:48

$$f(X) = Sin X$$

$$P_{r}(x) = f(0) + f'(0) x = x$$

$$f(0) = 0$$
 $f'(x) = (\infty x) + f'(0) = 1$

$$P_2(x) = P_1(x) + \frac{F''(0)}{2!} \cdot x^2 = P_1(x)$$

$$f''(x) = -S_{1}n \times f''(0) = 0$$

$$P_{2}(X) = \frac{F''(B)}{2!} X^{2}$$

$$0 \le \beta \le x$$

b)
$$R_2(x) = \frac{f''(\mathcal{B})}{2!} x^2$$
 $0 \le \mathcal{B} \le x$ alt. $R_2(x) = \frac{f''(\partial x)}{2!} x^2$, $0 \le \mathcal{O} \le 1$

$$R_3(x) = \frac{f^{(3)}(\beta)}{3!} \times 3$$
 $0 \le \beta \le x$
 $f^{(3)}(x) = -608x$

$$S_i: F(X) = X - \frac{\sin \beta}{2} x^2$$

$$F(X) = X - \frac{\cos \beta}{6} x^3$$

$$f(x) = x - \frac{\cos \beta}{6} x^3$$

$$||f_{2}(x)|| = \left|-\frac{\sin \theta x}{2} \cdot x^{2}\right| = \frac{|\sin \theta x|}{2} \times \frac{1}{2} \times \frac{1}{2} \times \frac{1}{10^{2}} = \frac{1}{200}$$

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$$|P_3(X)| = \left| -\frac{\cos 0 \times}{6} \times^3 \right| \leq \frac{1}{6} \times^3 \leq \frac{1}{6} \cdot \frac{1}{b^3} = \frac{1}{6 \cdot 6}$$

$$\cos 0 \times 4 \cdot 1$$

1-15 COS 0 X 61

Sr: Pz(x) ar minst o daran bast