Mathematical Equations

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1 Equations

$$f(x) = f(a)+f'(a)(x-a)+\frac{f''(a)}{2!}(x-a)^2+\frac{f'''(a)}{3!}(x-a)^3+...+\frac{f^{(n)}(a)}{n!}(x-a)^n \tag{1}$$

$$R_n = \frac{f^{n+1}(\epsilon)}{(n+1)!}(x-a)^{n+1} \tag{2}$$

$$f(x) = \frac{a_0}{2} + \sum_{i=1}^{\infty}[a_n cos(\frac{n\pi x}{L}) + b_n sin(\frac{n\pi x}{L})] \tag{3}$$

$$\rho(\frac{\partial v}{\partial t} + (v.\nabla)v) = -\nabla p + \mu\nabla^2 v + f \tag{4}$$

$$det(A) = \sum_{\sigma \epsilon S_n} sgn(\sigma)\prod_{i=1}^{n} a_{i,\sigma_i}\} \tag{5}$$

$$det(I+\lambda K) = \sum_{n=0}^{\infty}\frac{\lambda^n}{n!}\int ... \int det[K(x_i,x_j)]_{i,j=1}^{n} dx...dx_n \tag{6}$$

$$f(x) = \{\, x^2 + 1, \quad x > 0, det(A - xI), \quad x <= 0 \; and \; A \; \epsilon \; R^{n\times n}, \int_0^3 t^3 dt, \quad x \; \epsilon \; R, \tag{7}$$