1 Fórmulas

Biseccion

Punto medio

$$p = \frac{a+b}{2}$$

$$f(a) \cdot f(b) < 0$$

$$error_{estimado} = \frac{b-a}{2}$$

Iteraciones

$$n > \frac{exp}{log_{10}(2)}$$

Método del punto fijo

$$|g'(x)| < 1$$

$$x_{n+1} = g(x_n)$$

$$error = |\frac{x_{n+1} - x_n}{x_{n+1}}|$$

Newton-Raphson

$$x_n = x_{n-1} - \frac{f(x_{n-1})}{f'(x_{n-1})} \quad n \geq 1$$

$$error = |x_n - x_{n-1}|$$

Secante

$$x_n = x_{n-1} - f(x_{n-1}) \cdot \frac{x_{n-1} - x_{n-2}}{f(x_{n-1}) - f(x_{n-2})}$$

$$error = x_n - x_{n-1}$$

Posición falsa

$$x_n = x_{n-1} - f(x_{n-1}) \cdot \frac{x_{n-1} - x_{n-2}}{f(x_{n-1}) - f(x_{n-2})}$$

$$sgn\ f(x_{n-2}) \cdot sgn\ f(x_n) < 0$$

$$error = x_n - x_{n-1}$$