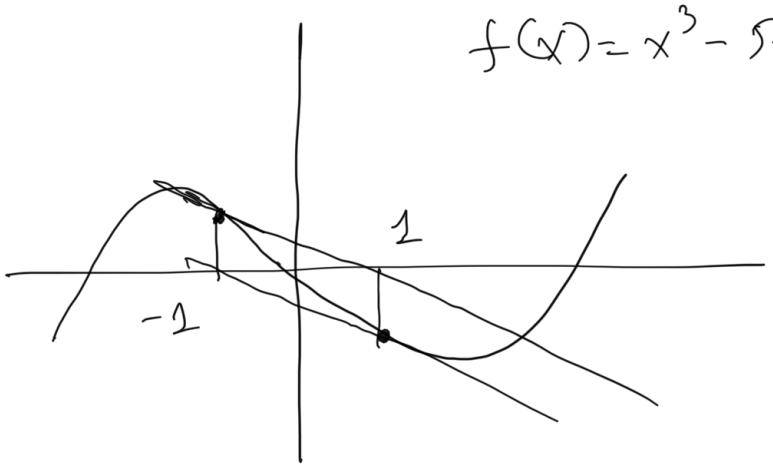

$$x_{k+1} = x_k - \frac{f(x_k)}{f'(x_k)}$$

$$g(x) = x - \frac{f(x)}{f'(x)}$$

$$g'(x) = 1 - \frac{f''(x) f(x)}{[f'(x)]^2} \to 0$$

$$g'(\alpha) = \frac{f''(\alpha) f(\alpha)}{[f'(\alpha)]^2} = 0$$

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

$= 0$

$f(\alpha) = 0$