$$p_n = p_{n-1} - \frac{f(p_{n-1})(p_{n-1} - p_{n-2})}{f(p_{n-1}) - f(p_{n-2})}$$

Note: to start the iteration we need 2 initial approximations: p_0, p_1.

Example: Using the secant method to find the solution

$$(x-2)^2 - \ln x = 0 \quad \text{in } 1 \le x \le 2$$

Let $p_0 = 1$, $p_1 = 1.5$

0	1
1	1.5
2	1.432726178
3	1.411129929
4	1.412408392
5	1.412391186
6	1.412391172 ← Newton's method arrived at this value on the 4th step

Notice: Secant method is a little slower than Newton's method but faster than the bisection method and functional iteration