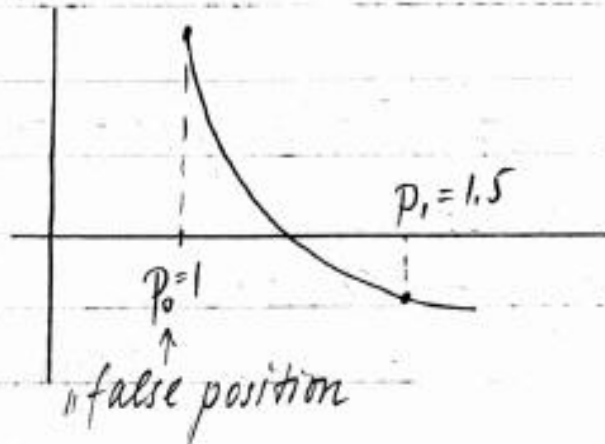


For our example

$$f(x) = (x-2)^2 - \ln x$$

$$f'(x) = 2(x-2) - \frac{1}{x} < 0 \text{ decreasing}$$

$$f''(x) = 2 + \frac{1}{x^2} > 0 \text{ concave up}$$



$$p_n = p_{n-1} - \frac{p_{n-1} - p_0}{f(p_{n-1}) - f(p_0)} f(p_{n-1})$$

$p_0$	1	$p_9$	1.412391743
$p_1$	1.5	$p_{10}$	1.412391299
$p_2$	1.432726178	$p_{11}$	1.412391200
$p_3$	1.416973158	$p_{12}$	1.412391178
$p_4$	1.413416651	$p_{13}$	1.412391173
$p_5$	1.412620333	$p_{14}$	1.412391172
$p_6$	1.412442365		
$p_7$	1.412402607		
$p_8$	1.412393726		