

## Fixed point iteration for the function $f(x) = x^3 + 3x - 4$

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We use the function

$$g(x) = \frac{4}{x^2 + 3}$$

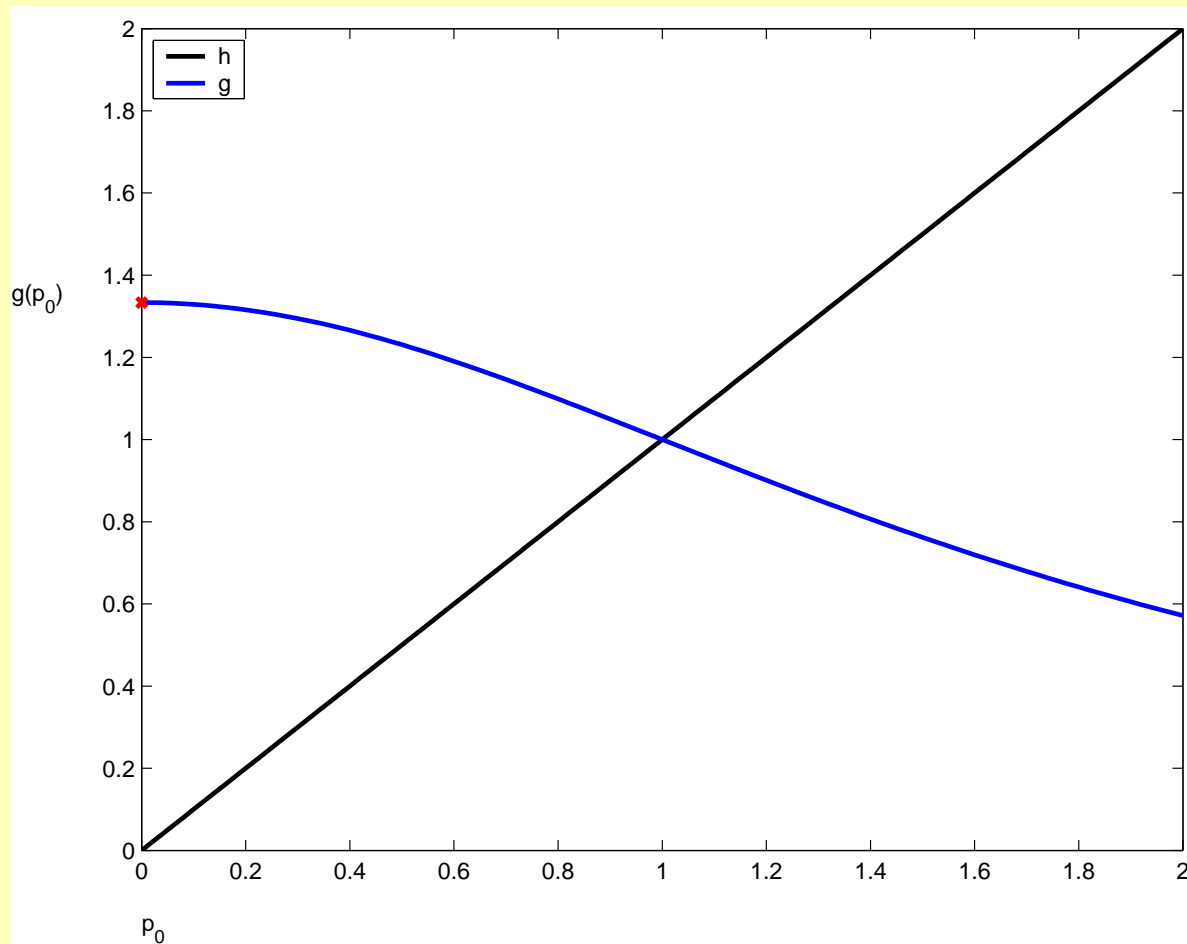
in our fixed point method. To derive this function we use the following steps:

$$f(x) = 0, \quad x^3 + 3x - 4 = 0$$

$$x^3 + 3x = 4 \rightarrow x(x^2 + 3) = 4 \rightarrow x = \frac{4}{x^2 + 3}$$

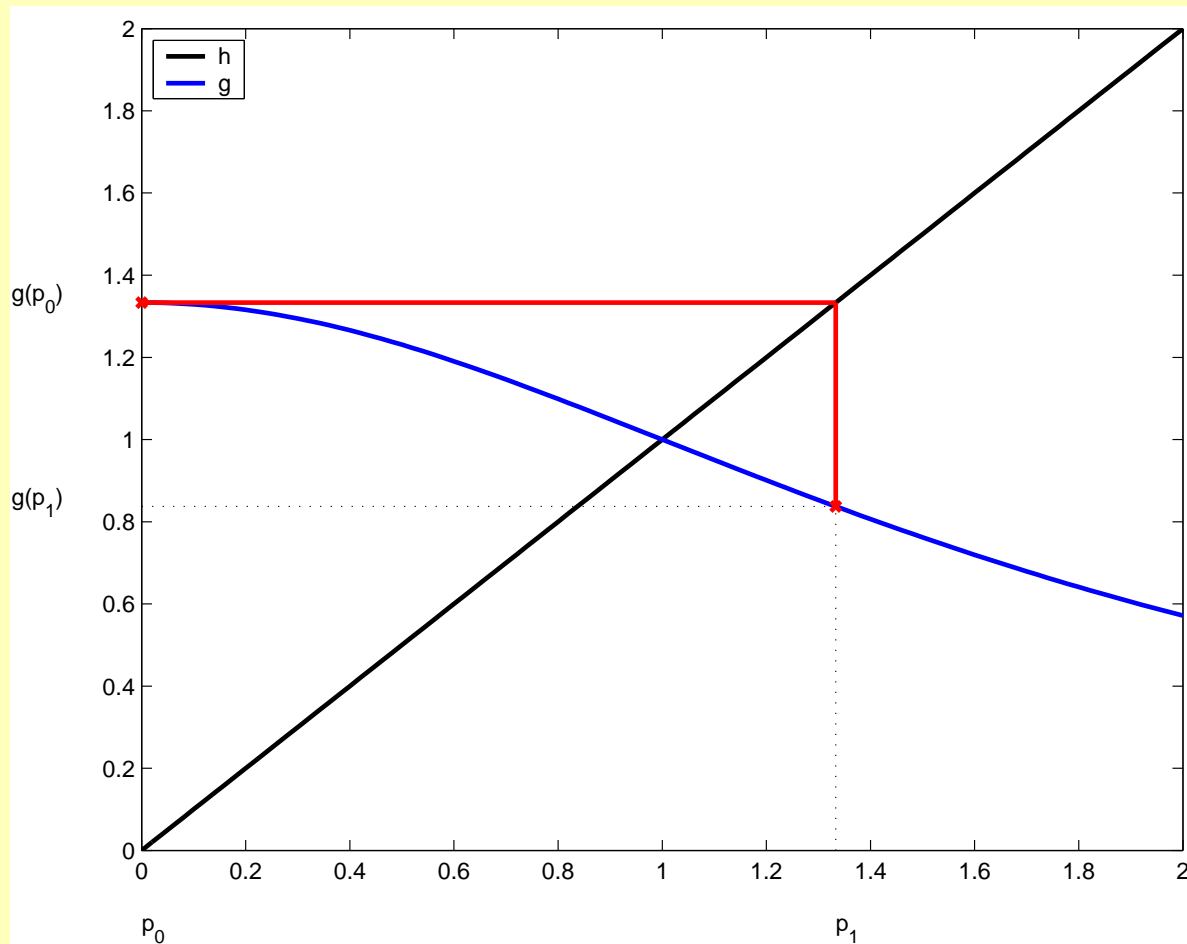
Click on **page down** of your keyboard to see the converging iterations

Fixed point iteration for the function  $f(x) = x^3 + 3x - 4$



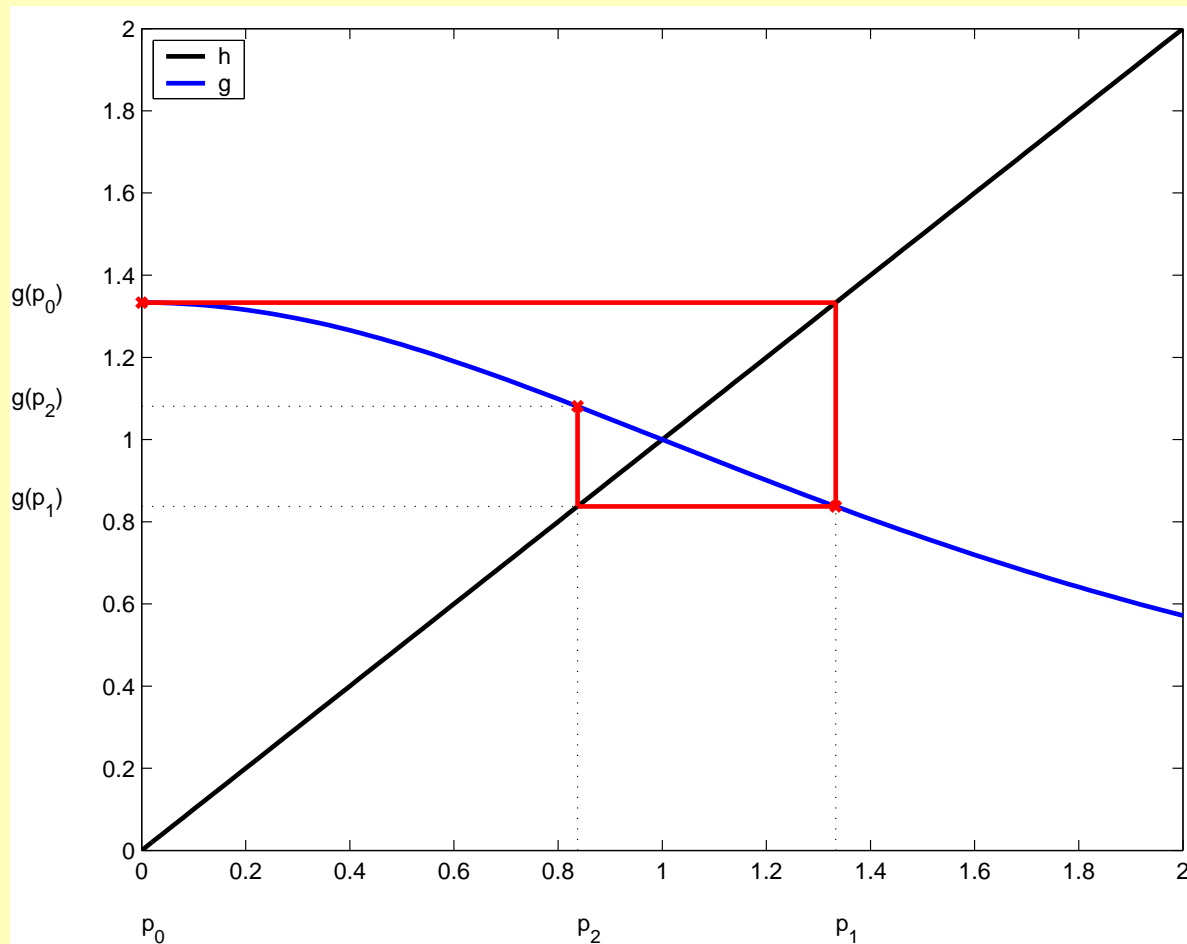
Start

*Fixed point iteration for the function  $f(x) = x^3 + 3x - 4$*



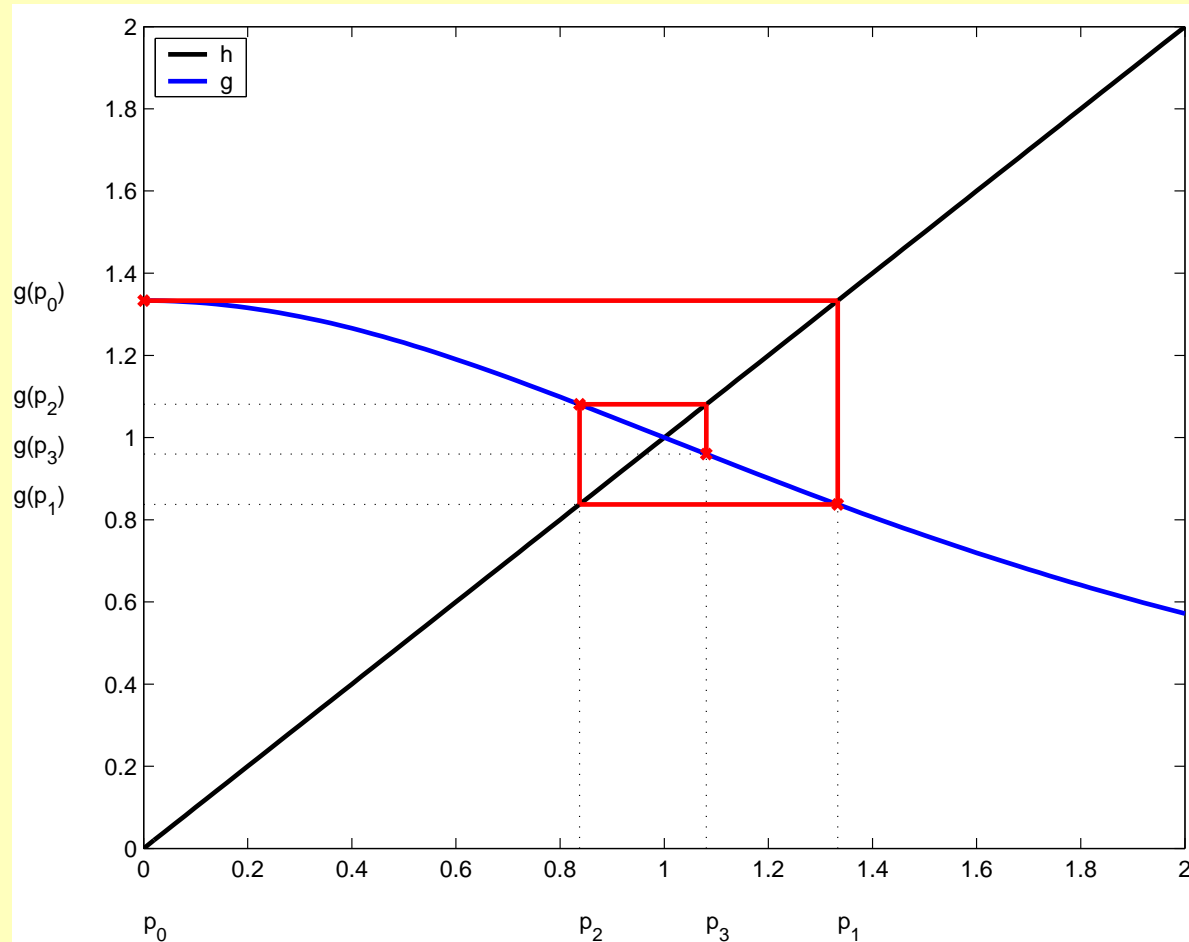
First iteration

*Fixed point iteration for the function  $f(x) = x^3 + 3x - 4$*



Second iteration

Fixed point iteration for the function  $f(x) = x^3 + 3x - 4$



Third iteration