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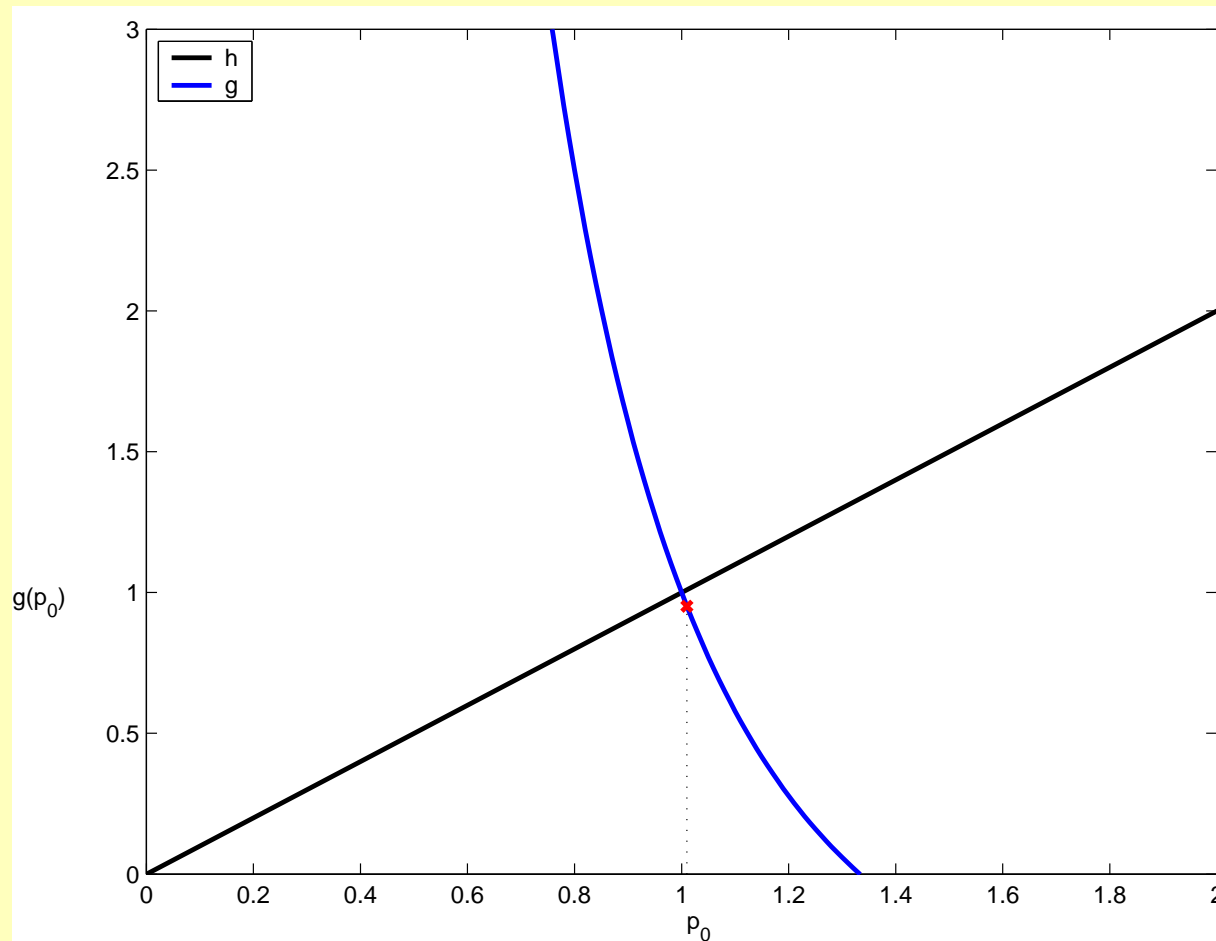
We use the function

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

in our fixed point method. To derive this function we use the following steps:
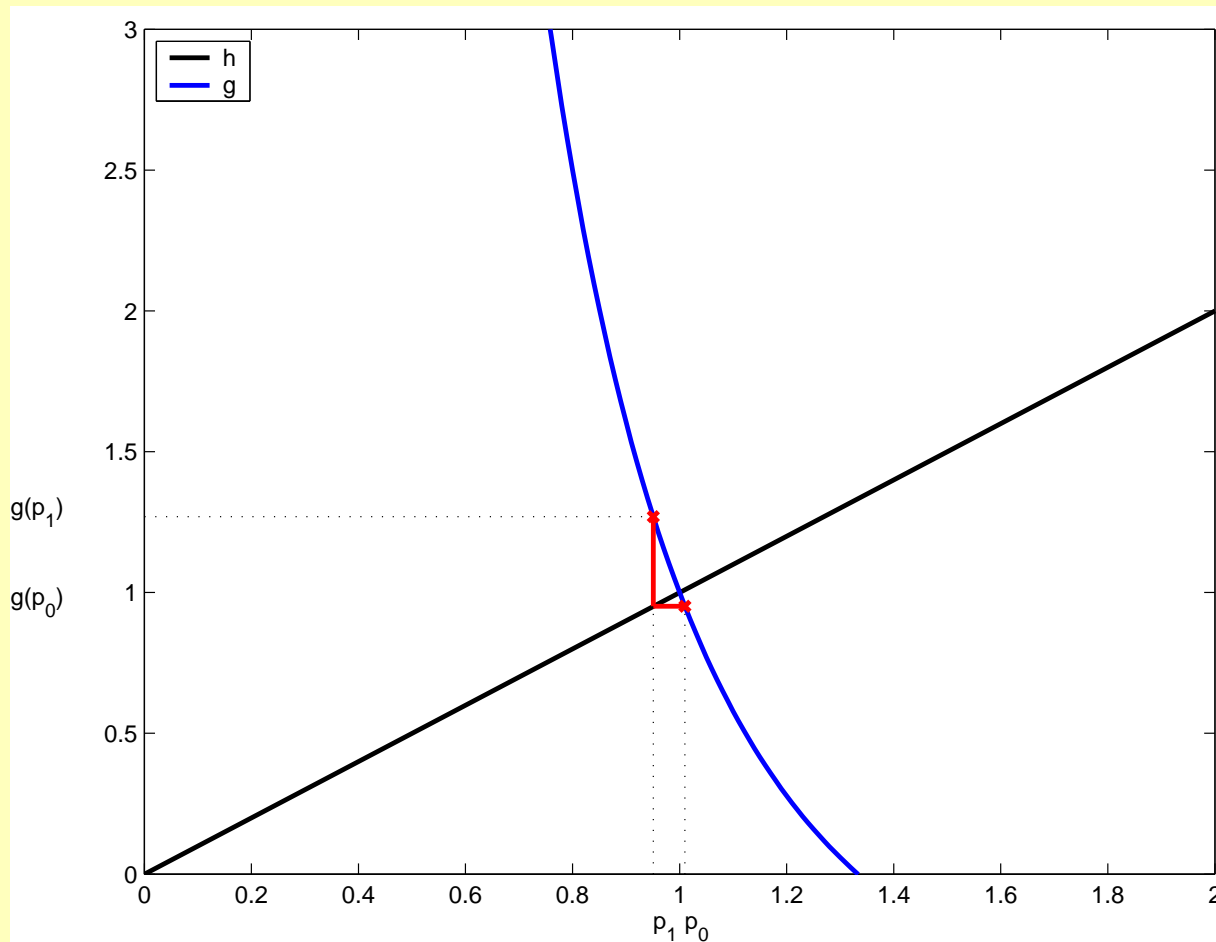
$$f(x) = 0, \quad x^3 + 3x - 4 = 0$$

$$x^3 = 4 - 3x \rightarrow x = \frac{4 - 3x}{x^2}$$

Click on page down of your keyboard to see the diverging iterations

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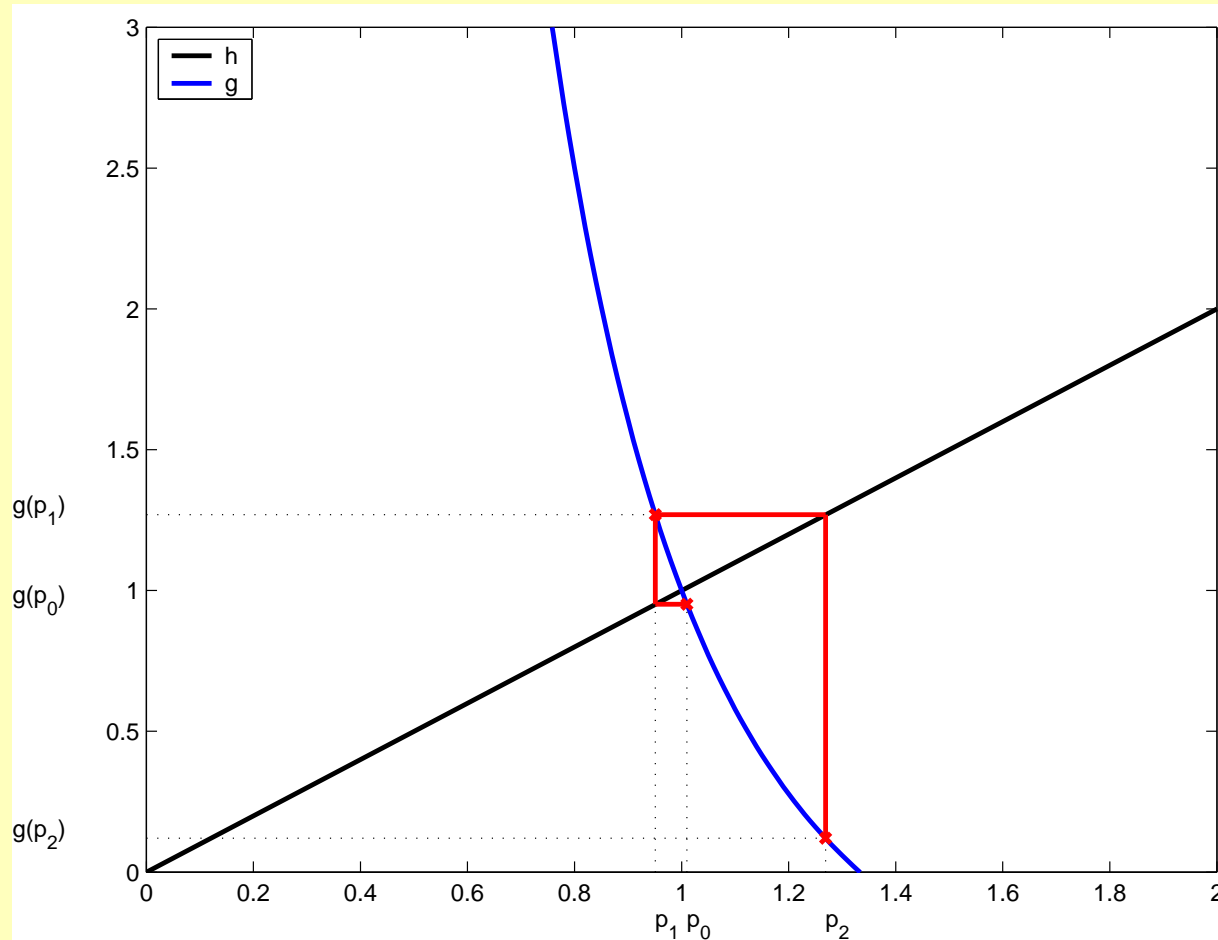

Start

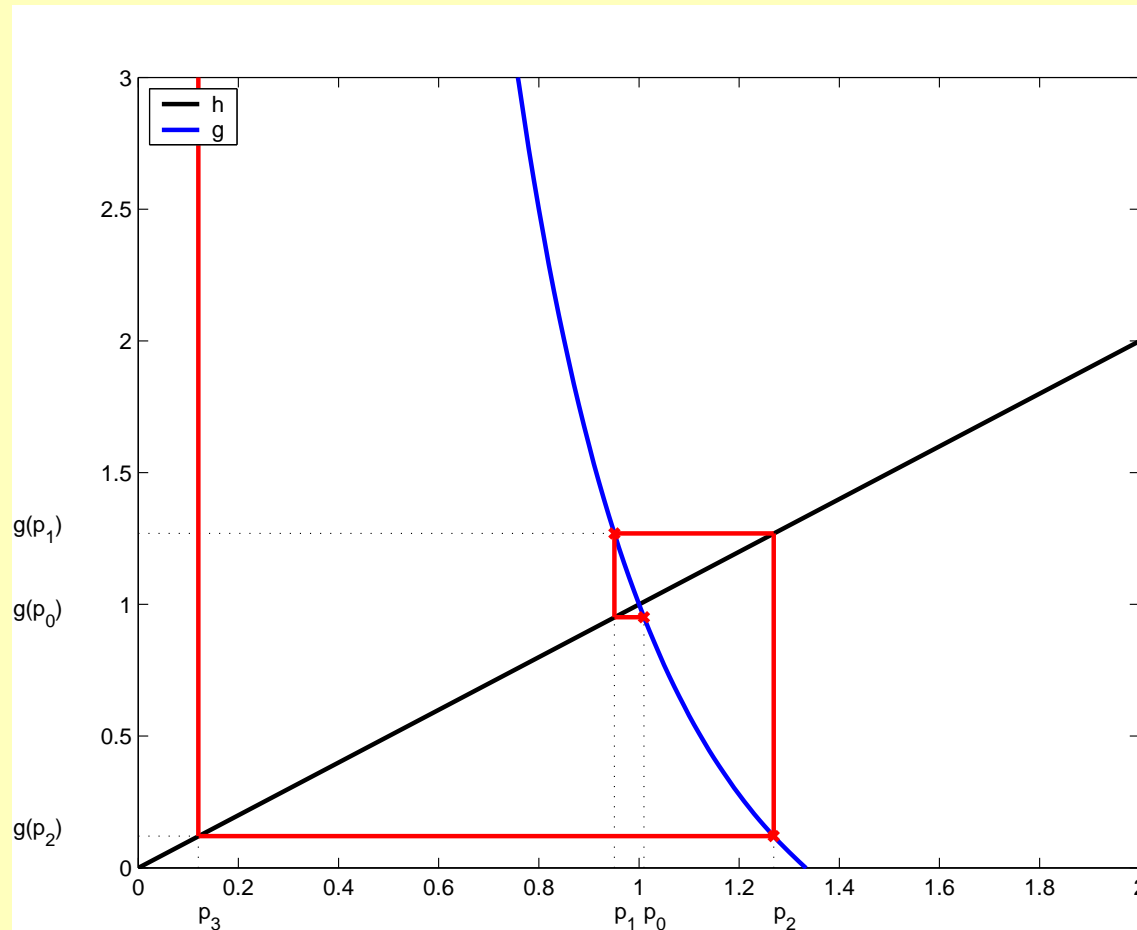# *Fixed point iteration for the function $f(x) = x^3 + 3x - 4$*

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