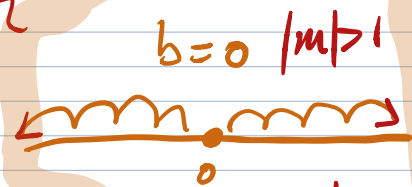


$$\begin{array}{l}
 x : x_0, x_0, \left( f(x_0), f(x_0) \right), f^2(x_0), f^2(x_0) \\
 y : 0, f(x_0), f(x_0), f^2(x_0), f^2(x_0), f^3(x_0), f^3(x_0)
 \end{array}$$

$$f(x) = 1.1x + b \quad x \in \mathbb{R}$$

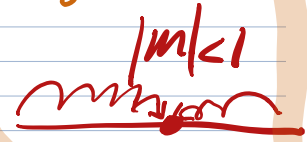
$$x_0 = 2$$

$$b = 0 \quad |m| > 1$$


$$f(x_0) = 2.2 = x_1 = f^1(x_0)$$

$$f(x_1) = 2.2 \cdot 1.1 = 2.42 = x_2 = f^2(x_0)$$

$$f(x_2) = 1.1 \cdot 2.42 = 2.662 = x_3 = f^3(x_0)$$

$$|m| < 1$$


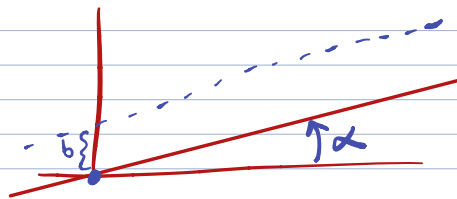
$$f^n(x_0) = (1.1)^n \cdot x_0$$

recta

$$[x_0, +\infty)$$

$$\text{Órbita} = x_0, x_1, x_2, x_3, \dots$$

Gráfica de  $f(x)$



$$\tan \alpha = 1.1$$

$$(f(x))^n = (1.1x)^n = (1.1)^n x^n$$

$$f(x) = 1.1x + 3$$

$$x_0 = 2$$

$$f(x_0) = 1.1 \cdot 2 + 3 = 5.2 = x_1$$

$$f(x_1) = 1.1 \cdot 5.2 + 3 = 8.72 = x_2$$

$$f(x_2) = 1.1 \cdot 8.72 + 3 = 12.592$$

$$f(x) = mx + b$$

$$f^n(x) = \underbrace{m(m(m(\dots(mx+b)+b)+b)\dots)+b}_n$$

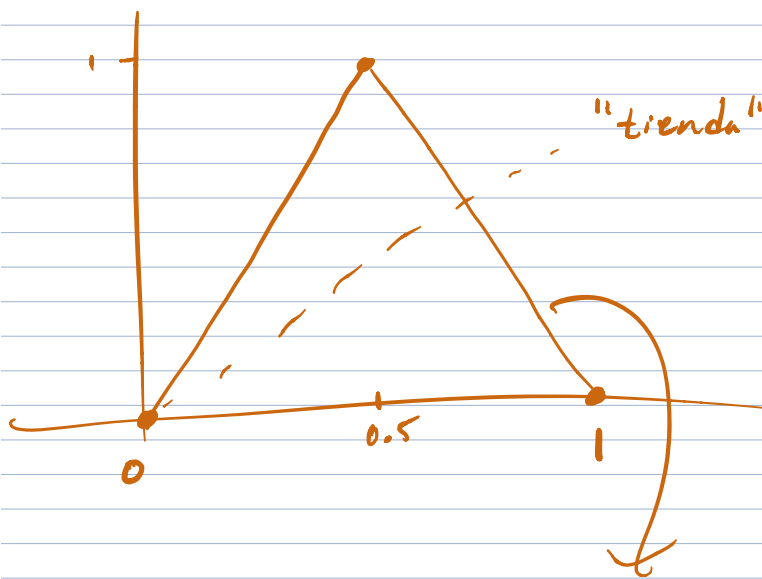
$$= m^n x + m^{n-1}b + m^{n-2}b + \dots + mb + b$$

$$f^3(x) = m(m(mx+b)+b)+b$$

$$= m(m^2x + mb + b) + b$$

$$= \underline{m^3x} + \underline{m^2b} + \underline{mb} + \underline{b}$$

$y = kx + v$  recta!



$$f(x) = \begin{cases} x \leq 0.5 & 2x \\ x > 0.5 & 2 - 2x \end{cases}$$

$$y = 2 - 2x$$

$$y = x$$

$$2 - 2x = x$$

$$2 = x + 2x$$

$$2 = 3x$$

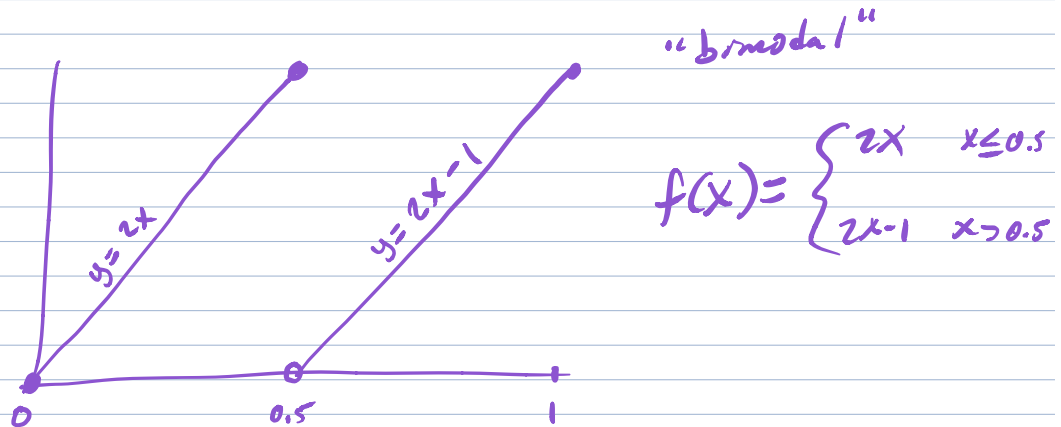
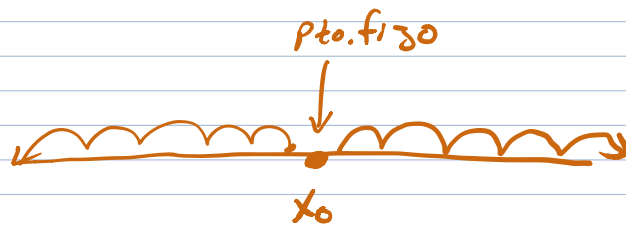
$$x = 2/3$$

pto. fijo

$$x = 0$$



pto. fijo



pto. fijo	
$2x = x$	$2x - 1 = x$
$2x - x = 0$	$x - 1 = 0$
$x = 0$	$x = 1$

