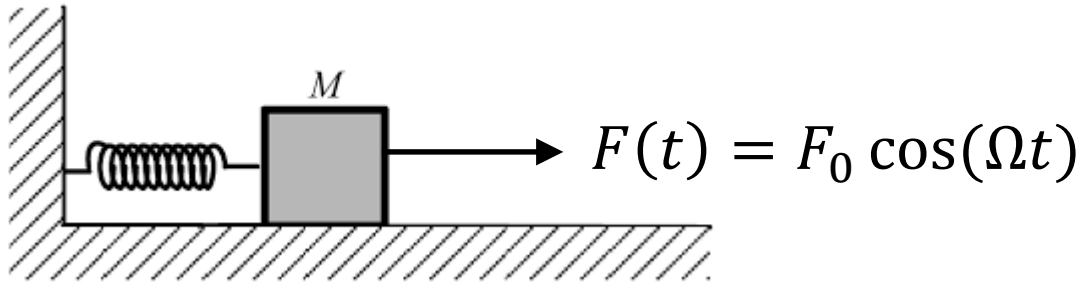
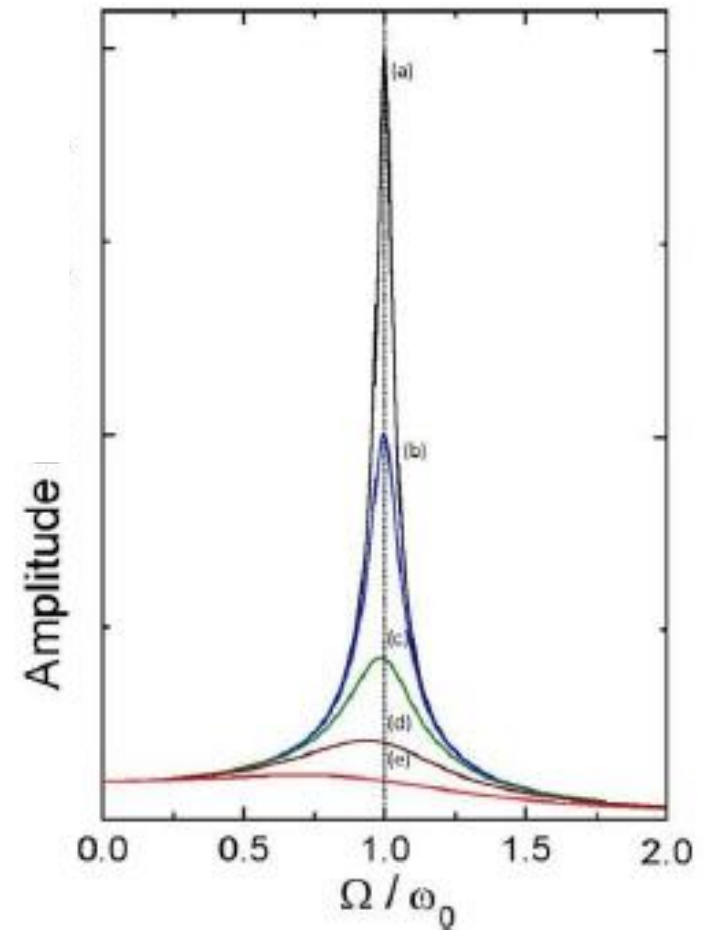
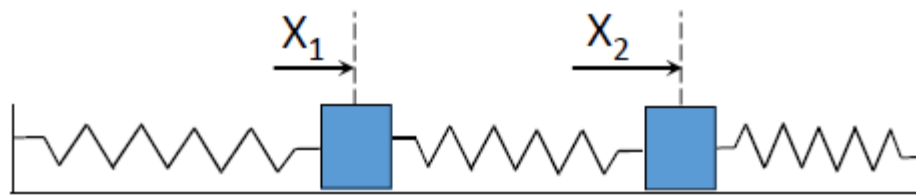


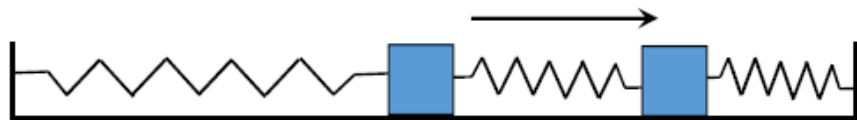
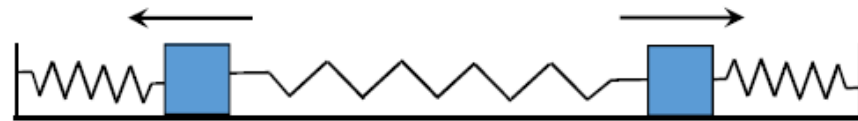
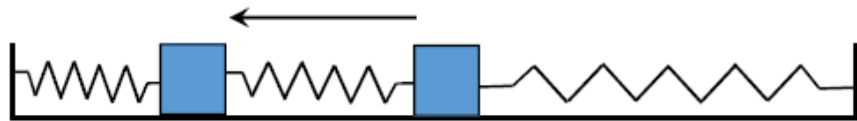
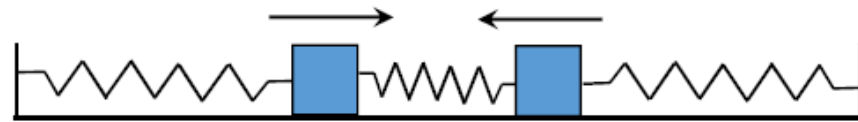
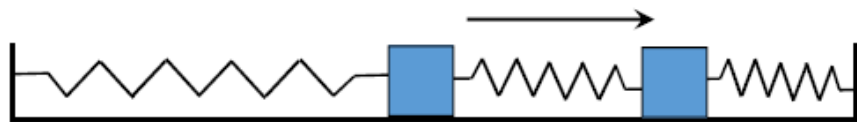
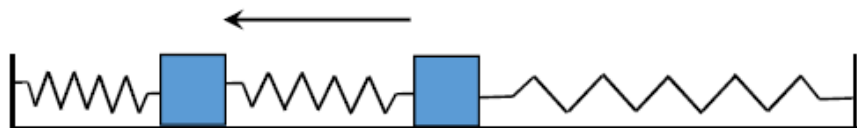
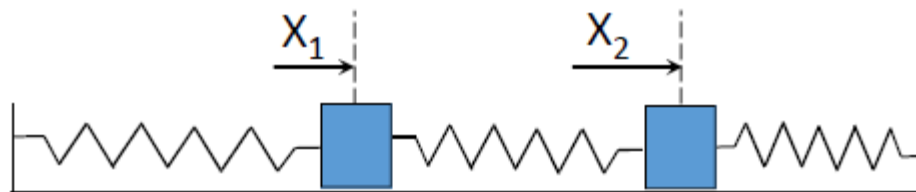
Cordas vibrantes



$$x(t) = A(\Omega) \cos(\Omega t + \phi)$$

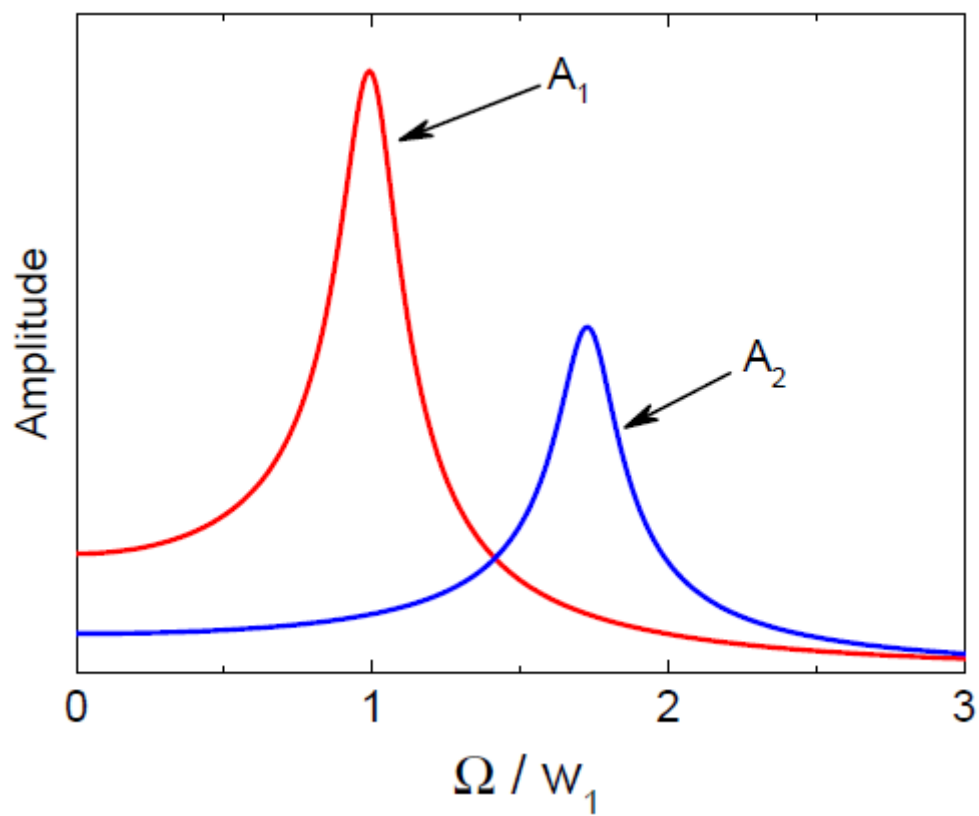
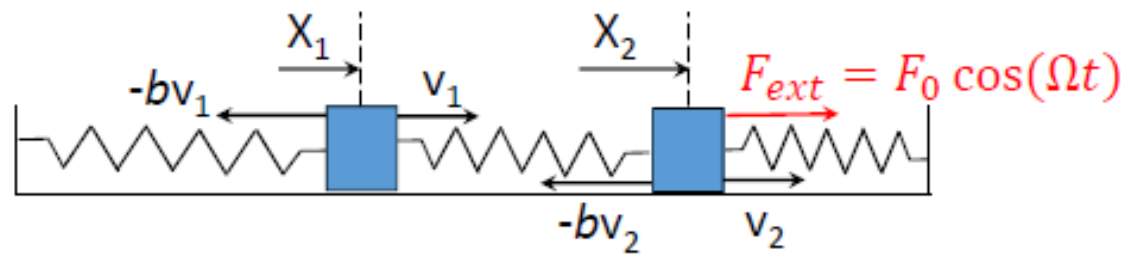






$$\omega_1 = \sqrt{\frac{k}{m}}$$

$$\omega_2 = \sqrt{\frac{3k}{m}}$$



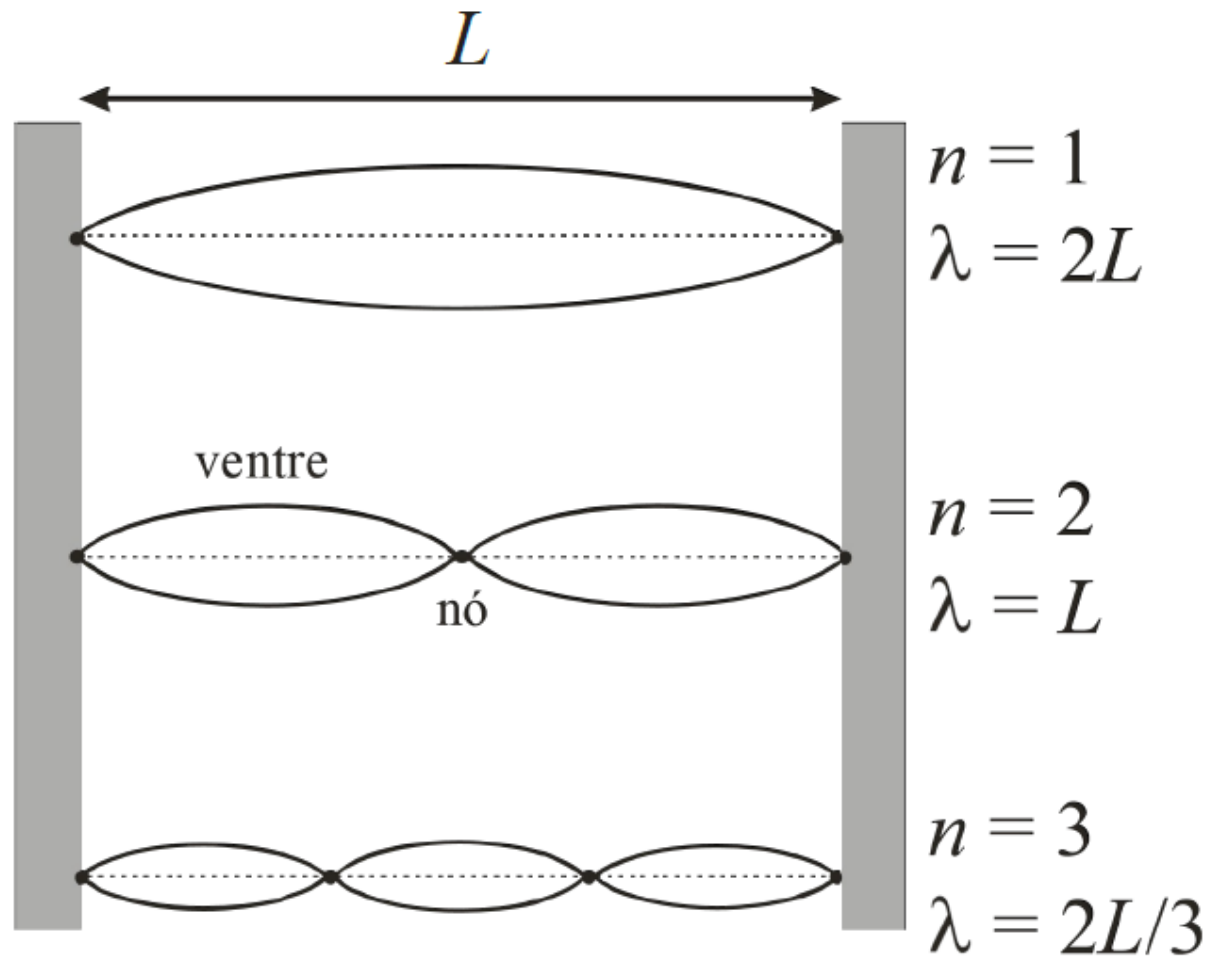


Figura 2.1. Modos normais de vibração de um fio de comprimento L .

Guia de Estudos de Cordas Vibrantes

$$f = \frac{n}{2L} \sqrt{\frac{T}{\mu}}$$

n = número de ventres

L = comprimento da corda

T = tensão aplicada na corda

μ = densidade linear da corda

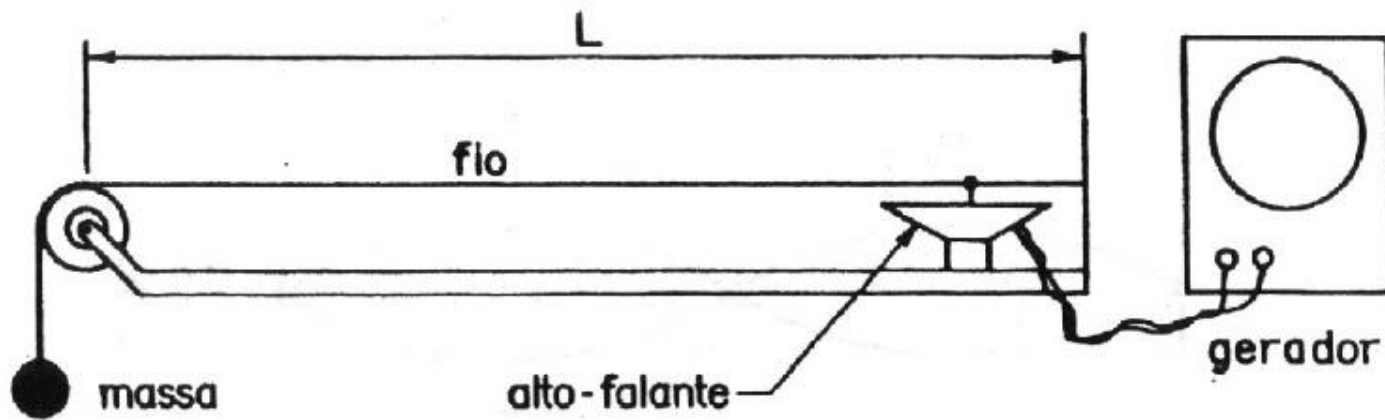


Figura 3.1. Arranjo experimental utilizado para estudar o fenômeno de ressonância de um fio tensionado.

$$f = C n^\alpha L^\beta T^\gamma \mu^\delta$$

n = número de ventres

L = comprimento da corda

T = tensão aplicada na corda

μ = densidade linear da corda

$C, \alpha, \beta, \gamma, \delta$ = constantes

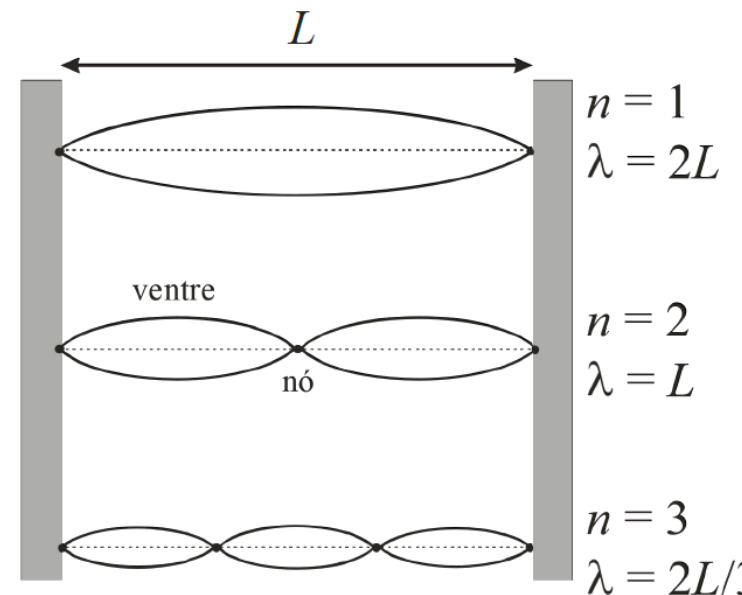
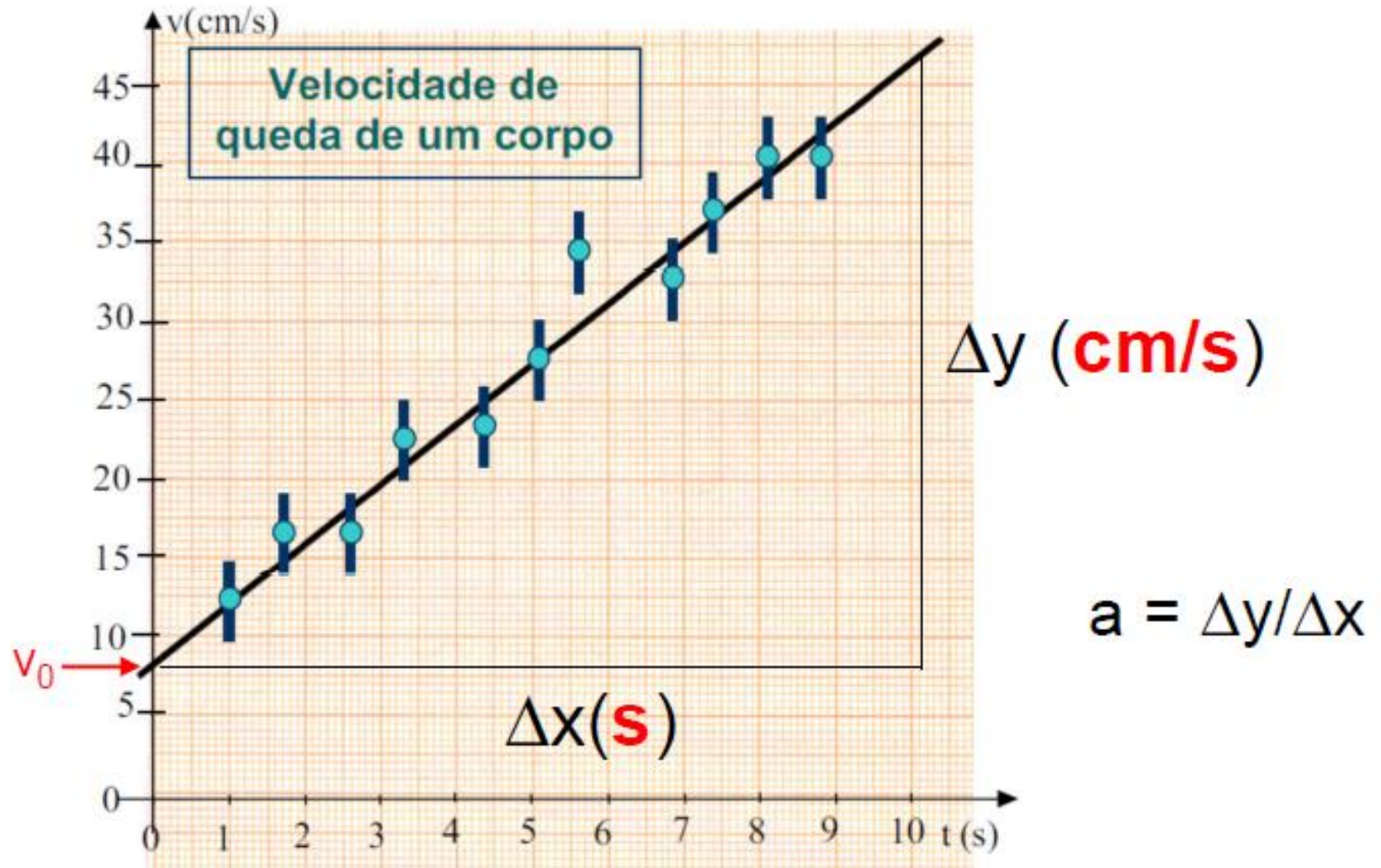
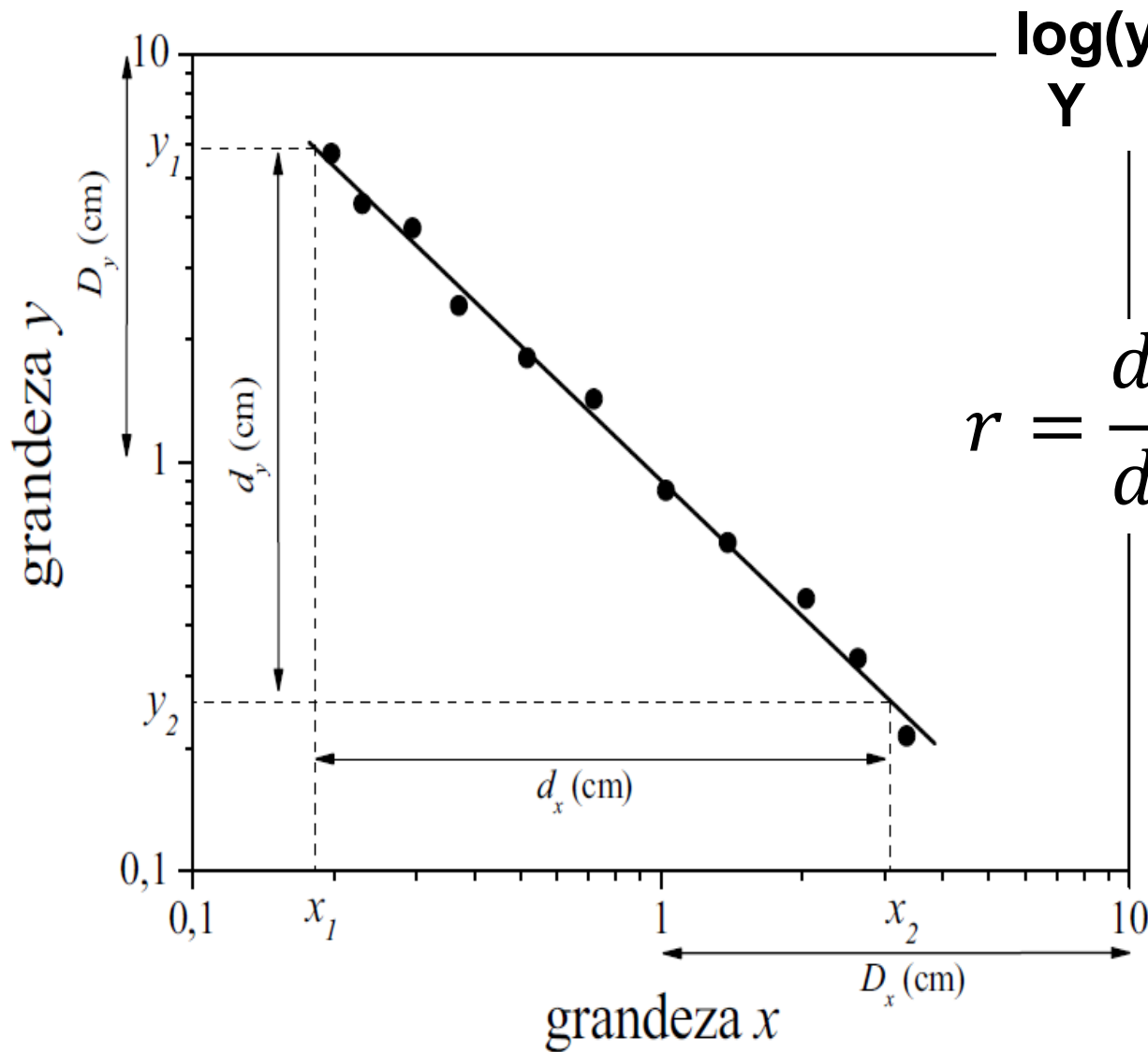


Figura 2.1. Modos normais de vibração de um fio de comprimento

Reta em papel milimetrado: $v(t) = v_0 + at$



“Reta” em papel di-log: $y = Ax^r$



$$\log(y) = \log(A) + r \log(x)$$
$$Y = C + r X$$

$$r = \frac{d_y(\text{cm})}{d_x(\text{cm})} \times \frac{D_x(\text{cm})}{D_y(\text{cm})}$$

$$A \Rightarrow x = 1$$

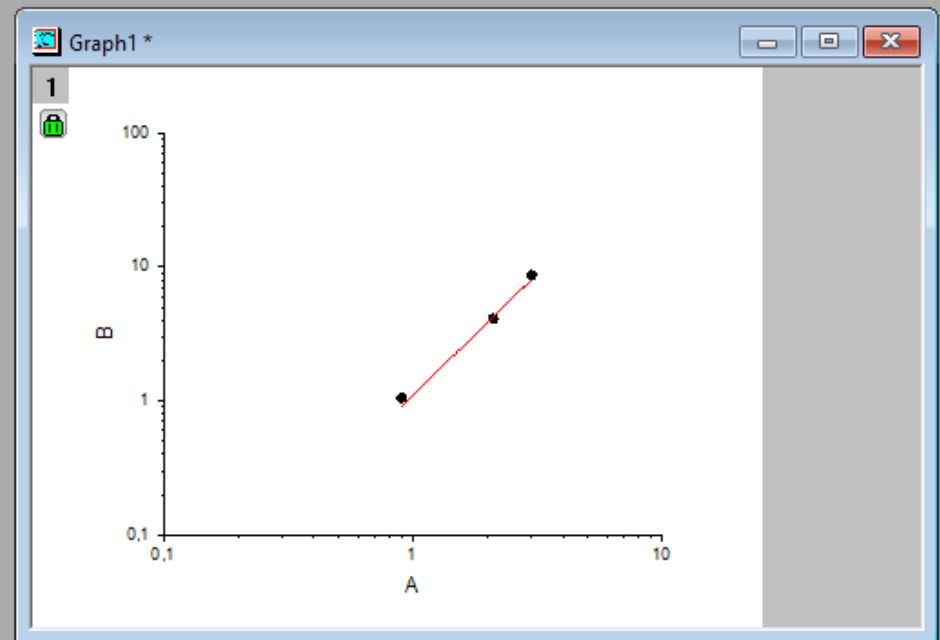
Programa ORIGIN

Origin 2016 (Academic) 64-bit - C:\Users\LuzCarlos\Documents\OriginLab\2016\User Files\UNTITLED * - /Folder1/

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	A(X)	B(Y)	C(yEr±)
Long Name			
Units			
Comments			
F(x)=			
1	0,9	1,05	0,05
2	2,1	4,1	0,05
3	3	8,7	0,2
4			
5			
6			
7			
8			
9			
10			
11			



Regressão Linear ou Ajuste por Chi-quadrado

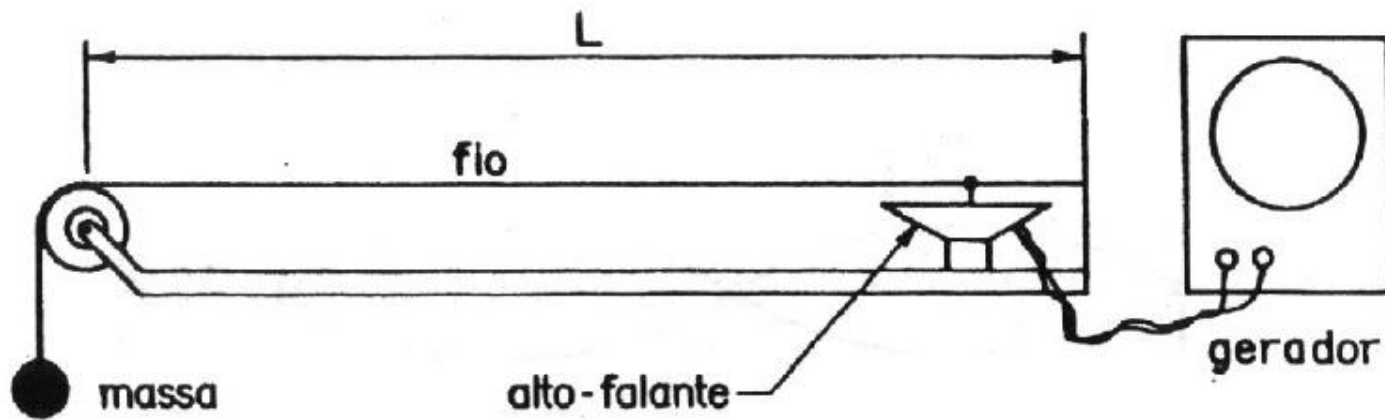


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$$f = C n^\alpha L^\beta T^\gamma \mu^\delta$$

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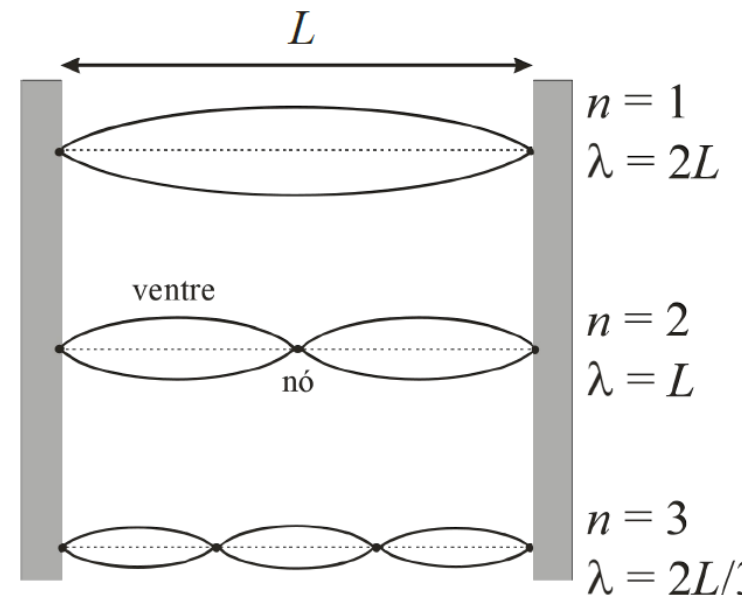


Figura 2.1. Modos normais de vibração de um fio de comprimento

