Experiment 11: Standing Waves in a String 7/13/2022

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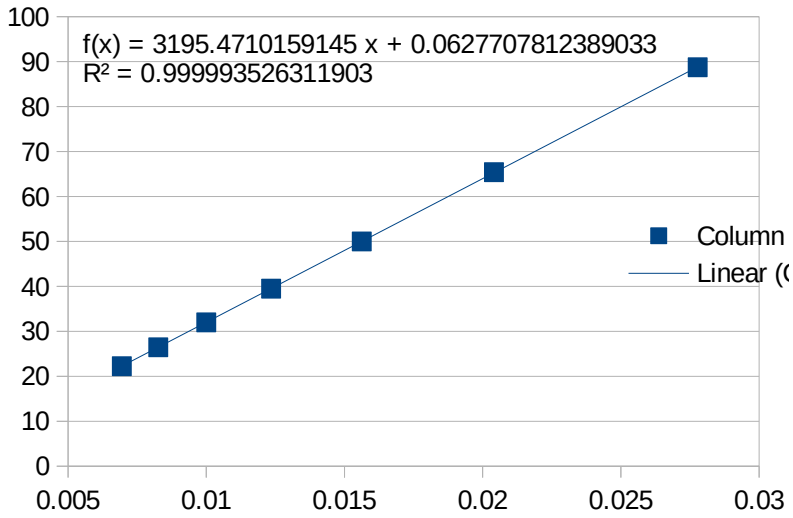
Section Number: 51002

DATA

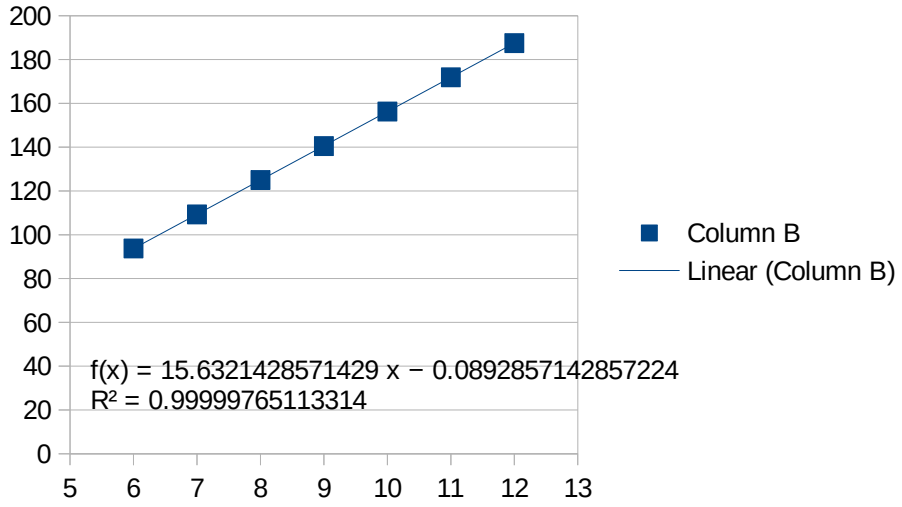
A. Variable Tension, Constant Frequency and Length

Table 11.1		
	μ (sim) =	3.2e-3 kg/m
	L =	4 m
	f =	125 hz
n	$1/n^2$	F_T
6	0.0277778	*88.75*
7	0.0204082	*65.4*
8	0.015625	*50*
9	0.0123457	*39.5*
10	0.01	32
11	0.0082645	26.45
12	0.0069444	22.25
	slope =	3195.5
	μ (calc) =	3.1955e-3 kg/m
	% diff =	0.14%



B. Variable Frequency, Constant Tension and Length

Table 11.2	
μ (sim) =	3.2e-3 kg/m
L =	4 m
F_T =	125 hz
n	***f***
6	*93.75*
7	*109.3*
8	*125*
9	*140.5*
10	156.25
11	171.9
12	187.5
slope =	15.632
μ (calc) =	3.21E-03
% diff =	0.32%



C
Column C)