4B 5-7-14

Grade calculation:

18+18+40 = 76%
FINAL = 24%.

$$X = \left(\frac{\text{SUM}^{**}}{300}\right)(40) + \left(\text{fraction}^{*}\right)(18) + \left(\frac{\text{score}}{50}\right)(18)$$

Exams — Quizzes — 1 Lab

40+18+18 = 76% FINAL = 24%

* masteringphysics.com

** normalized sum of

grade is based on 3 scores: exams, tests, quizzes

$\frac{X}{76} \times 100\% =$ your %.

TODO: verify if masteringphysics.com does the same.

OPTIONS: ONE MORE LAB OR:

RESEARCH PAPER ON:

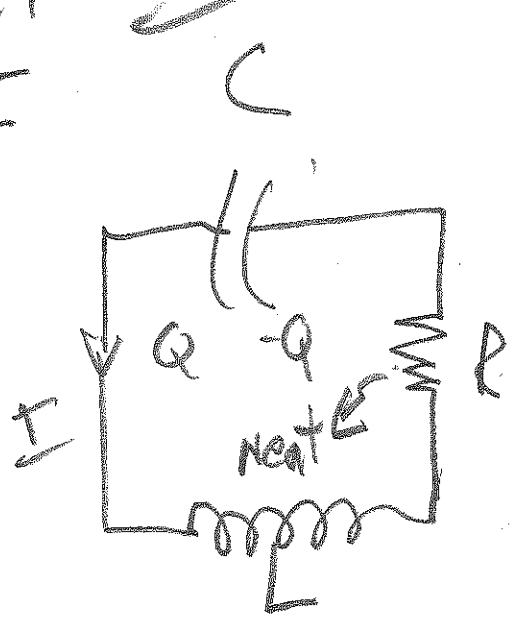
a current event in
newspaper, magazine,* written for audience
with some physics background

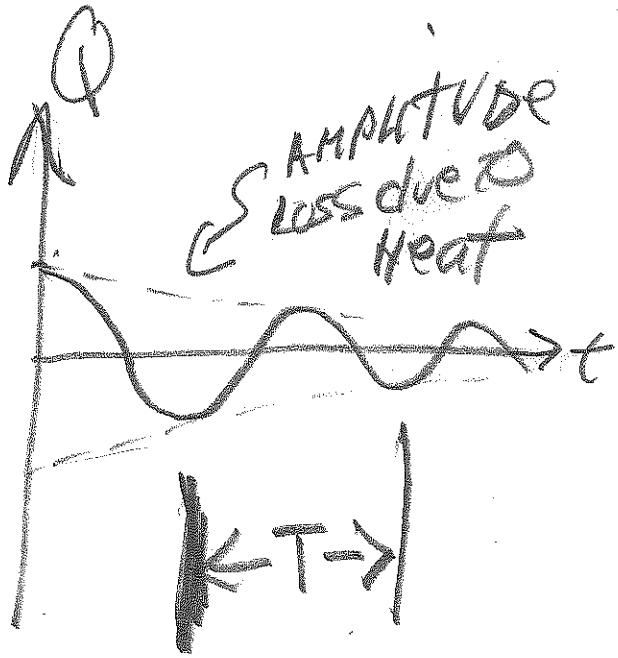
→ high school level

PHYSICS 2A-2B
or PHYSICS 4B.

MAKE it CLEAR. explain
underlying physical
phenomena related
TO 4B MATERIAL.

5-7-14 ON 30 - supplements

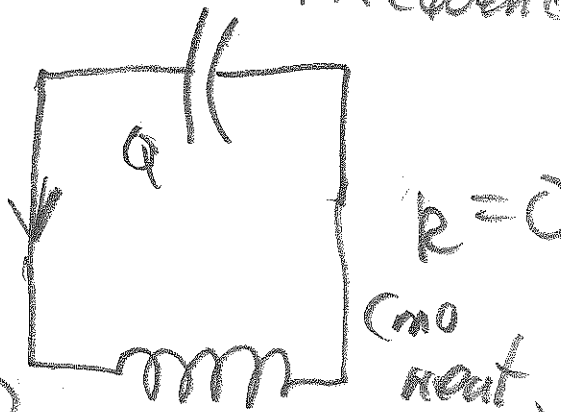




$$T \approx \frac{1}{f} = \frac{1}{(\omega/2\pi)} = \frac{2\pi}{\omega}$$

$$\omega_n \approx \frac{1}{\sqrt{LC}}$$

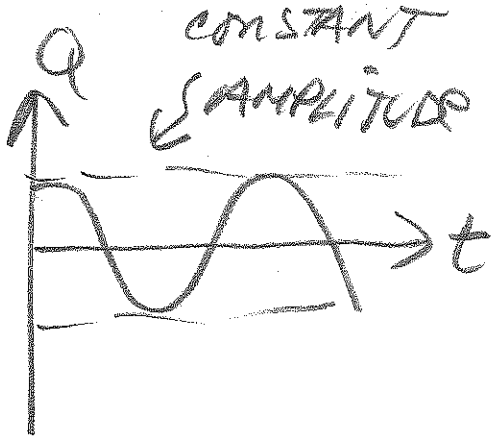
ω_n = NATURAL FREQUENCY



$(\omega = \omega_n)$

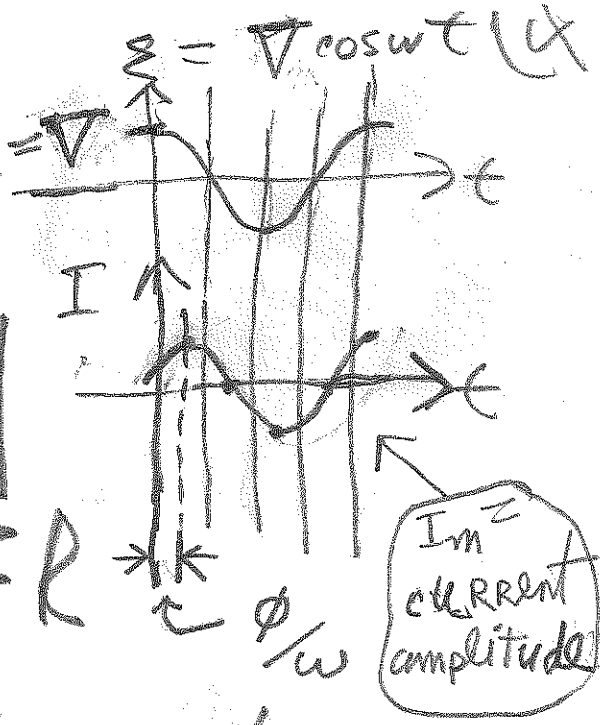
$Q = Q_{MAX} \cdot \cos \omega t$

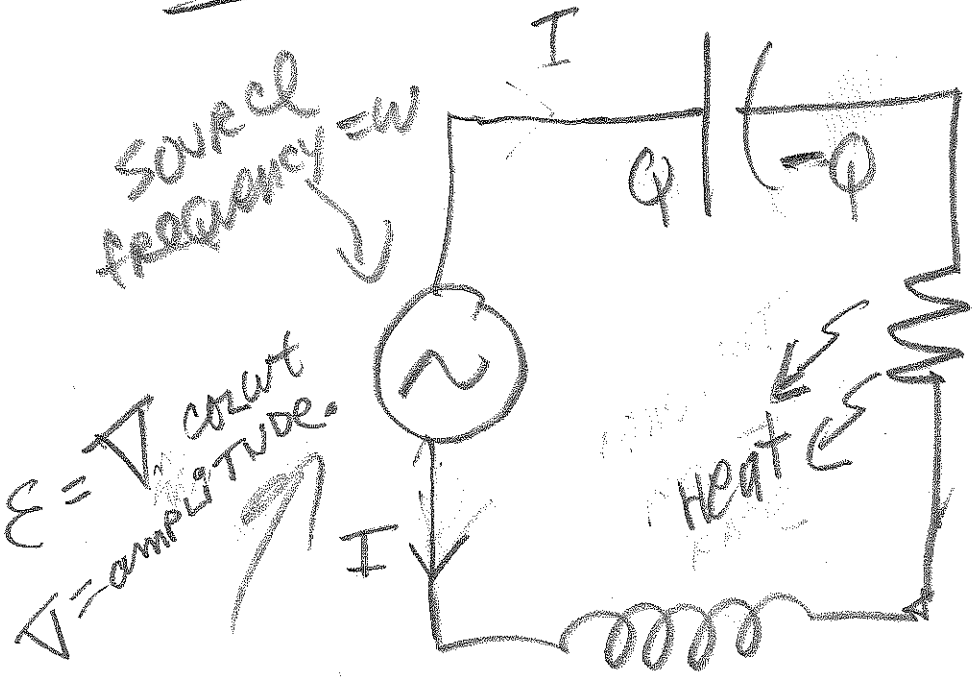
$\omega = \frac{1}{\sqrt{LC}}$



5-7-14

Supplements Ch 31





$\omega \neq \omega_n$ in general

I is shifted.

$I = I_m \cos(\omega t - \phi)$

out of phase from $\mathcal{E}$.

VOLTAGE SOURCE

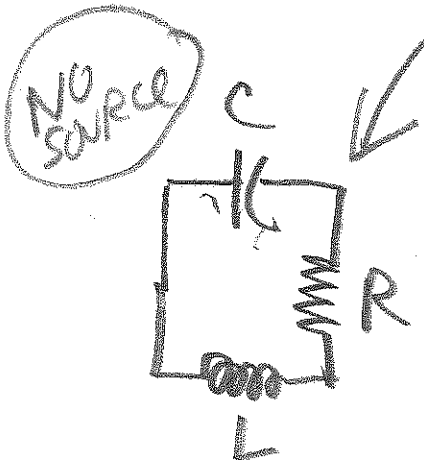
Drive an LRC circuit

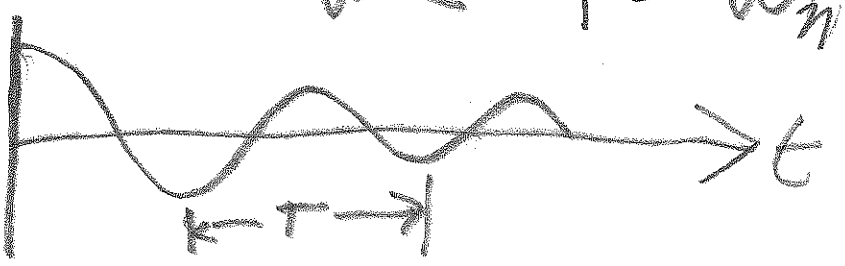
That has a

natural frequency

$$\omega_n = \frac{1}{\sqrt{LC}} \qquad T = \frac{2\pi}{\omega_n}$$

NO SOURCE



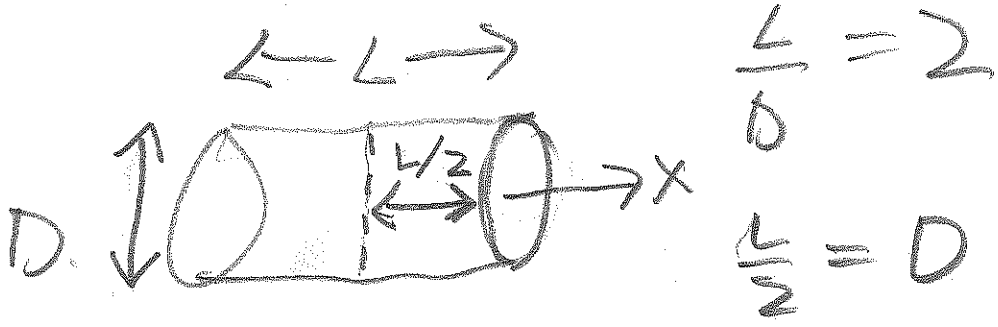


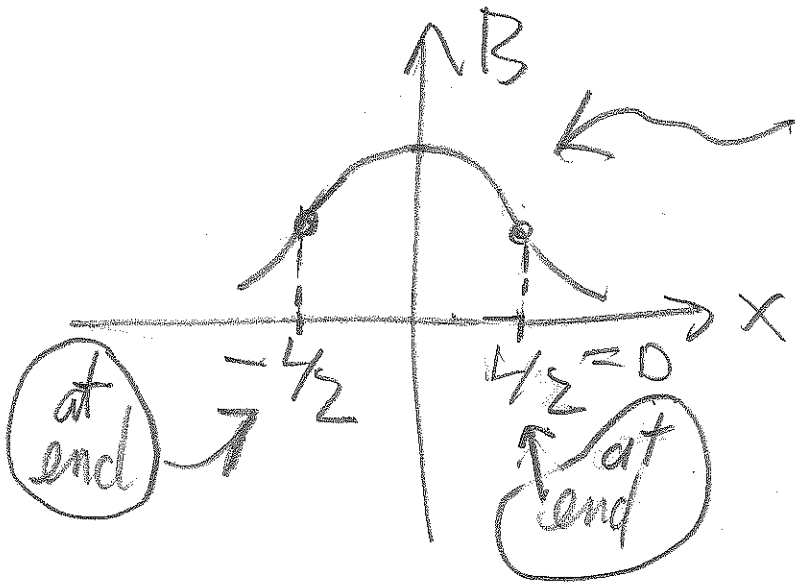
5-7-14

Symmetry II: analysis #1 (1b) comment

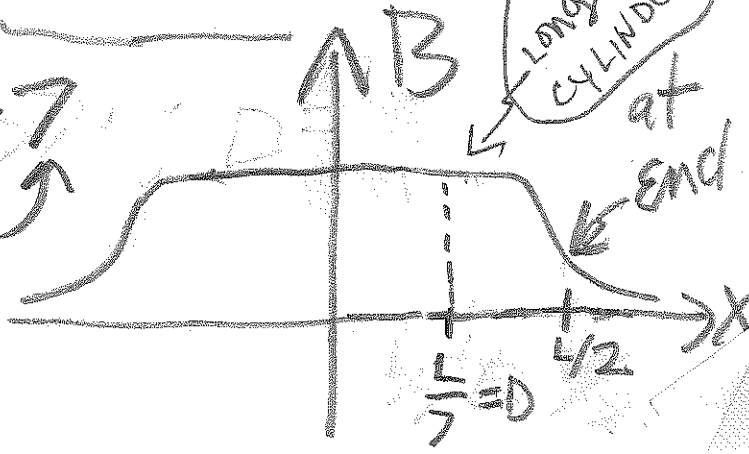
Extension

p940: Ch28 see solenoid example.





shorter cylinder has more non-uniform field vs. x along axis than long cylinder.



Same if $\frac{L}{D} = 1$

$\frac{L}{D} = D$

LAB Result

(larger L, same D)