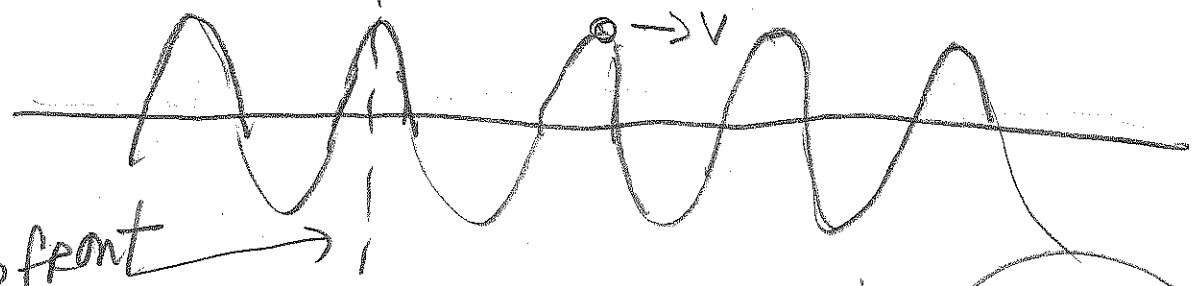
3-27-13 CH 23

Wave review

Transverse string wave: $v = \sqrt{\frac{\text{Tension}}{\mu}}$



wavefront

$\mu = \frac{\text{mass}}{\text{length}}$ $\left(\frac{kg}{m}\right)$

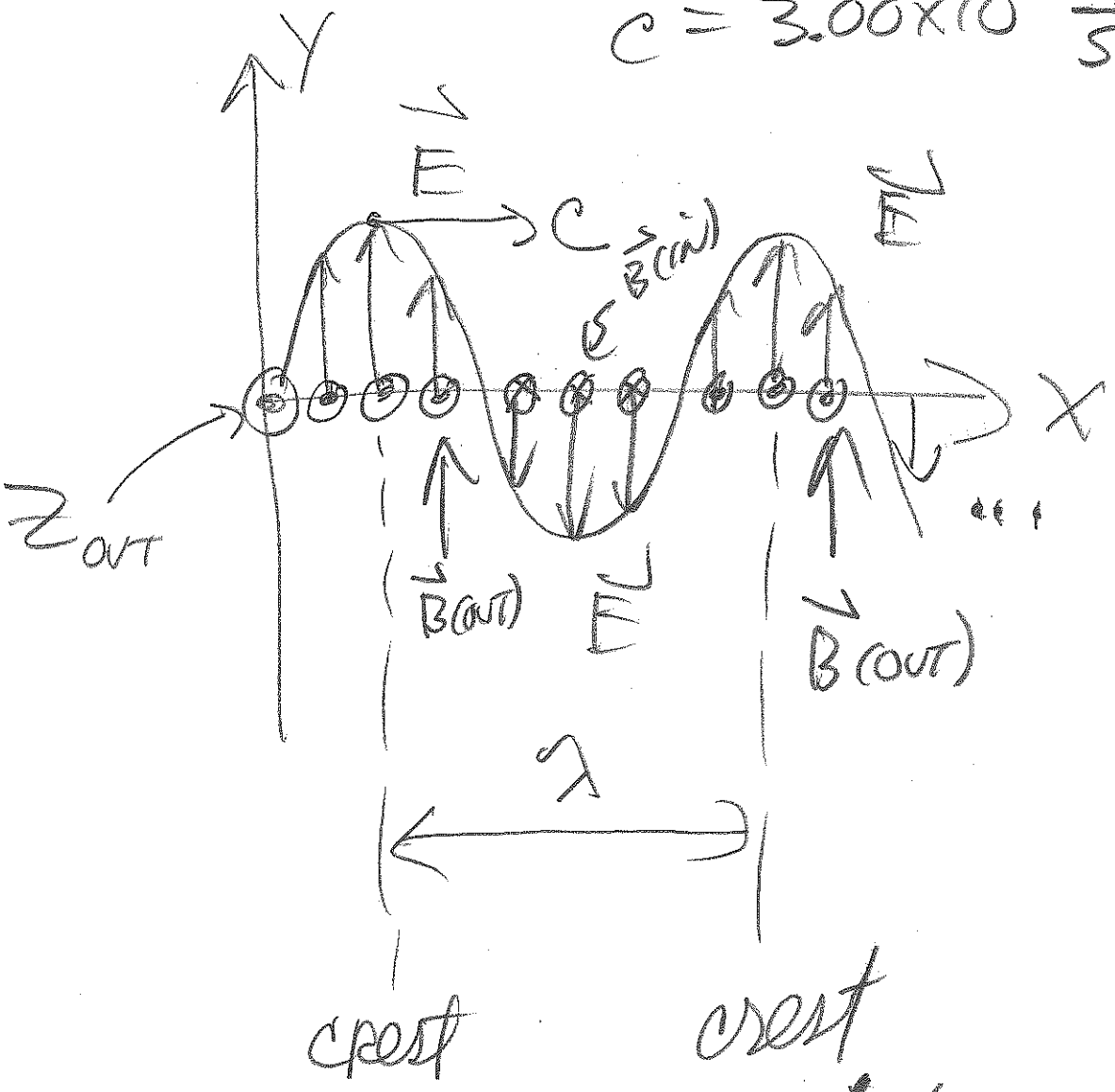
note: LARGE μ, LARGE inertia → SMALL v

CH 11, 12: ~~IF~~ 4A only was taken, DO E.C on M.P. ← masteringphysics.com

↑ extra credit

EM wave.

$c = 3.00 \times 10^8 \frac{m}{s}$



CH11 $c = \frac{\text{distance}}{\text{time}} = \frac{\lambda}{\text{PERIOD}}$

CH12 $c = \frac{\lambda}{\left(\frac{1}{f}\right)} = \lambda f$

see Fig 23.3 (spectrum)

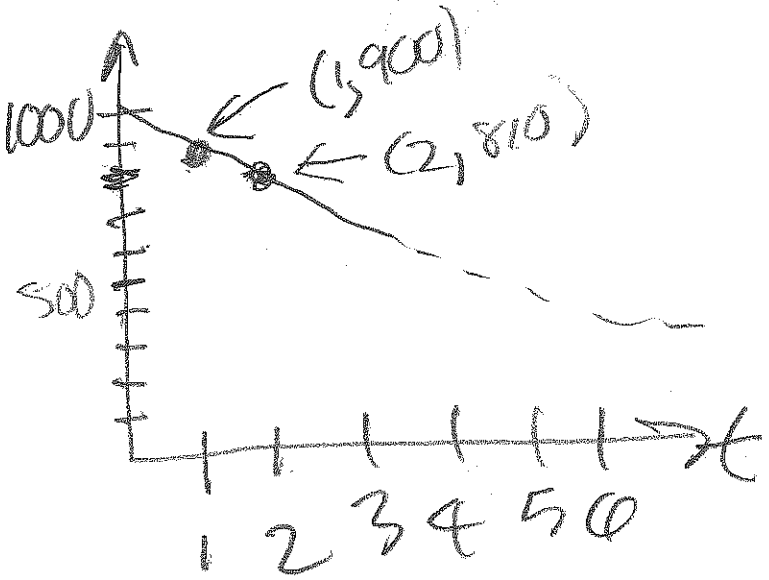
RC Lab update

prel. ques 1, 2.

analysis 1 – 7.

ext 5.

Prob. 1



$1000 \cdot (0.90)^t = Ae^{-kt}$

$A = 1000$

$(0.90)^t = e^{-kt}$

$\ln(0.90)^t = t \cdot \ln(0.90) = -kt$, solve for $k = -\log(0.90)$

→ Explain how adding parallel C changes the time constant. What happens to decay curve? More or less gradual!