Ch 16-1 Date: 1/27/16

Name: ID#

In a taut string, the harmonic frequencies $f\_{3}=150Hz ,f\_{n}=250Hz$ and$f\_{m}=350Hz$. What is value of the fundamental frequency and what are the values of n & m?

$∵ f\_{n}=n\frac{v}{2L} ∴ f\_{1}=\frac{v}{2L} \& f\_{3}=3f\_{1} $

$∴ f\_{3}=3f\_{1}=150 Hz ⟹ f\_{1}=50 Hz $

$$And f\_{n}=n×50=250 Hz ⟹ n=5$$

$$ f\_{m}=m×50=350 Hz ⟹ n=7$$