

P #C

Ch 14-Worksheet

a) $v = 333 \text{ m/s}$
 $f_1 = 300 \text{ Hz}$

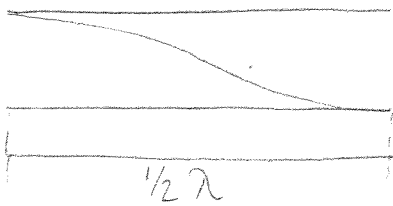
$L = ?$

Find λ :

$$v = f \cdot \lambda$$

$$(333 \text{ m/s}) = (300 \text{ Hz}) \cdot \lambda$$

$$\lambda = 1.11 \text{ m}$$



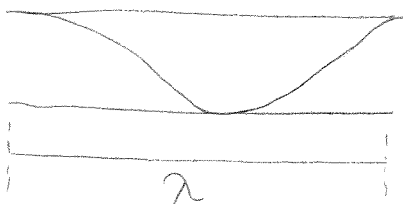
$$L = \frac{1}{2} \cdot \lambda$$

$$= \frac{1}{2} (1.11 \text{ m})$$

$$L = .555 \text{ m}$$

b) $v = 344 \text{ m/s}$
 $L = .555 \text{ m}$

$f_2 = ?$



$$\lambda = L$$

so $\lambda = .555 \text{ m}$

$$v = f \cdot \lambda$$

$$(344 \text{ m/s}) = f \cdot (.555 \text{ m})$$

$$f = 620 \text{ Hz}$$