



$$f = 440 \text{ Hz}$$

$$v = 343 \text{ m/s}$$

$$\lambda = \frac{v}{f} = 0.7795 \text{ m}$$

A. $\frac{(y - 2.80)}{\lambda} = \frac{2\pi n}{2\pi}$ ← constructive

$$y = 1.24 \quad n = -2$$

$$y = 2.02 \text{ m} \quad n = -1$$

$$y = 2.80 \text{ m} \quad n = 0$$

$$y = 3.58 \text{ m} \quad n = 1$$

$$y = 4.36 \text{ m} \quad n = 2$$

$$(y - 2.80) = n\lambda$$

B. $\frac{(y - 2.80)}{\lambda} = \frac{(2n+1)\pi}{2\pi}$ destructive

$$y - 2.80 = \frac{1}{2}\lambda \quad (n=0)$$

$$\underline{y = 3.19 \text{ m}}$$

$$f = \frac{343}{343 - 2} \cdot 440 = 442.6$$

↑ moving source

beat freq
 $442.6 - 440$
 $= \underline{2.6 \text{ Hz}}$