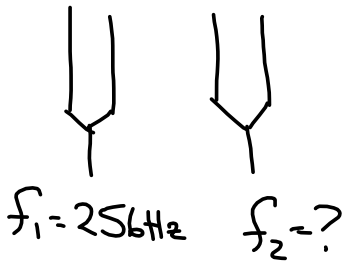


Example



$f_b = 5 \text{ Hz}$

$f_b = |f_1 - f_2|$
 $5 = |256 - f_2|$ OR $5 = |f_2 - 256|$

$f_2 = 256 - 5 = 251 \text{ Hz}$ OR $f_2 = 5 + 256 = 261 \text{ Hz}$

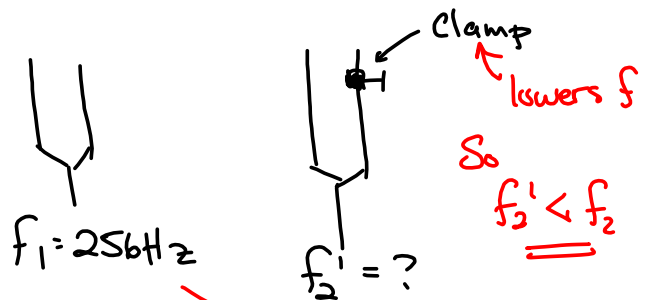
① $f_2 = 251 \text{ Hz}$ OR 261 Hz AND ② $f_2' = 253 \text{ Hz}$ OR 259 Hz

AND ③ $f_2' < f_2$ (because of clamp)

$f_2 = 261 \text{ Hz}$

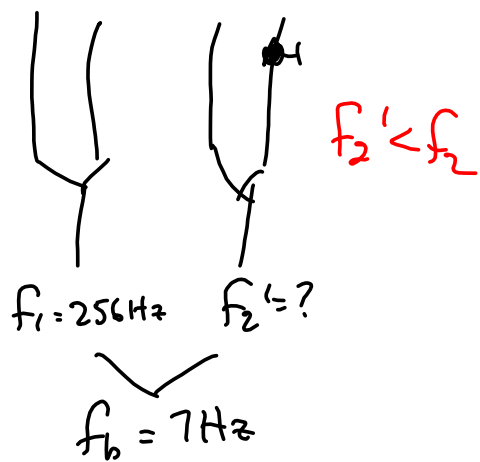
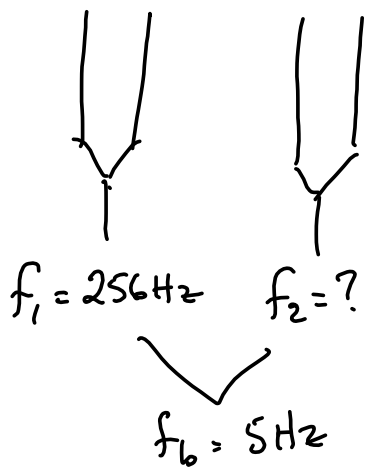
$f_2' = ?$ still can't tell which.

[If $f_2 = 251 \text{ Hz}$ then f_2 must be $< f_2'$, so statement ③ would be false. Since ③ is true $f_2 \neq 251 \text{ Hz}$]



$f_b = 3 \text{ Hz}$

Question: What is f_2 ?
 What is f_2' ?

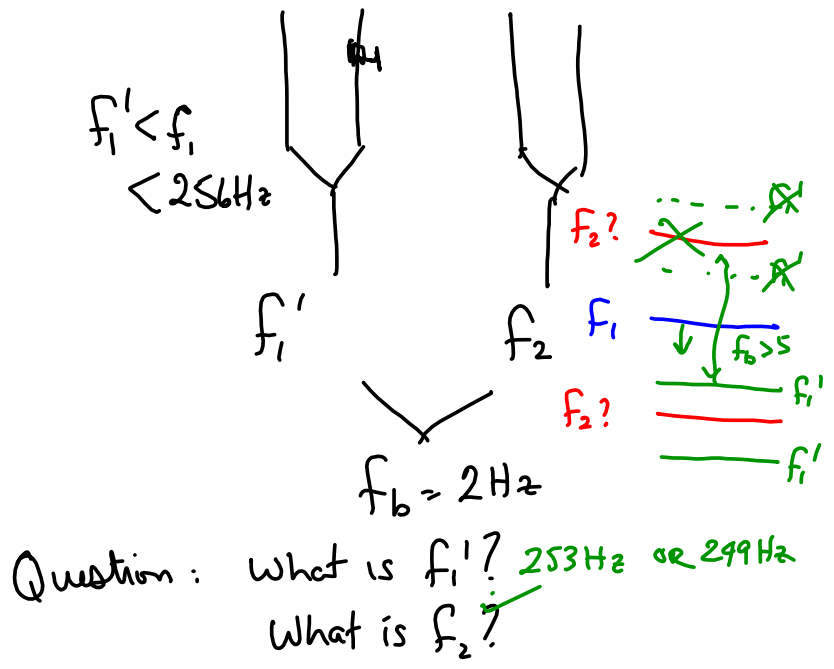
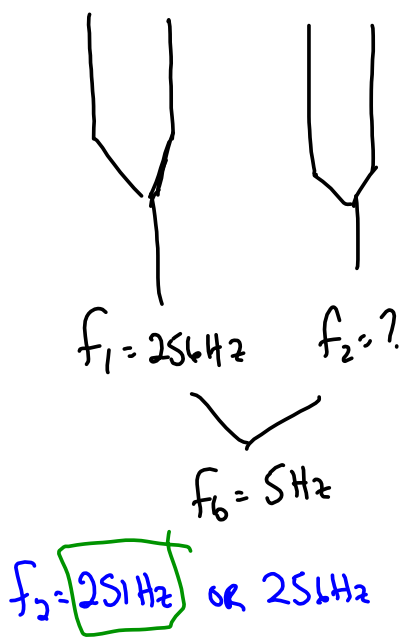


What is f_2 ? 251 OR 261 Hz

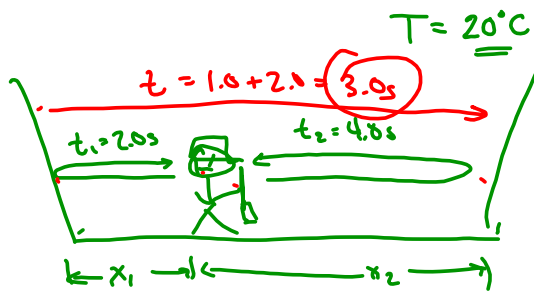
$f_2' = 249 \text{ Hz}$

$f_2 = 251 \text{ Hz}$ OR 261 Hz

$f_2' > 249 \text{ Hz}$ OR ~~268 Hz~~ $> f_2$



7.



$$x_1 = v_s \frac{t_1}{2}$$

$$x_1 = 343 (1.0) = 343 \text{ m}$$

$$x_2 = v_s \frac{t_2}{2}$$

$$x_2 = 343 (2.0) = 686 \text{ m}$$

$$v_s = 331 + 0.6T$$

$$= 331 + 0.6(20^\circ\text{C})$$

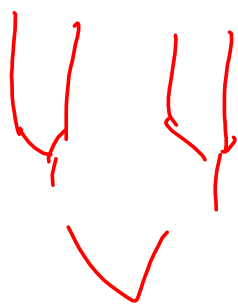
$$= \underline{\underline{343 \frac{\text{m}}{\text{s}}}}$$

$$d = x_1 + x_2 = \underline{\underline{1029 \text{ m}}}$$

$$d = v_s t$$

$$= (343 \frac{\text{m}}{\text{s}})(3.0\text{s}) = \underline{\underline{1029 \text{ m}}}$$

Equivalent problem



$$f_b =$$

$$f_b = |f_1 - f_2|$$

submit
answer

251 or 261 Hz ? Where