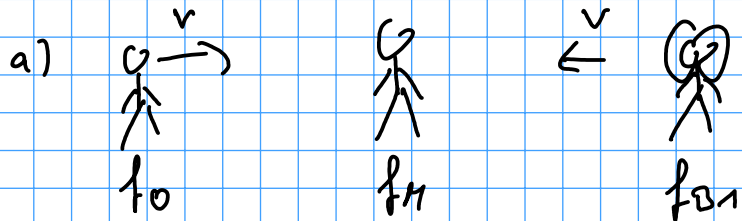


## Aufgabe 18



$$f_H = \frac{1}{1 - \frac{v}{c}} f_0$$

$$f_{01} = \left(1 + \frac{v}{c}\right) f_H$$

$$f_{01} = \frac{1 + v/c}{1 - v/c} f_0 = 447.2 \text{ Hz}$$

b.) Hin- und Rückweg:  $v \rightarrow -v$

$$\rightarrow f_{02} = \frac{1 - v/c}{1 + v/c} f_0 = 432.9 \text{ Hz}$$

$$f_{01} / f_{02} = 1.033 \hat{=} \text{knapp Halbtone}$$