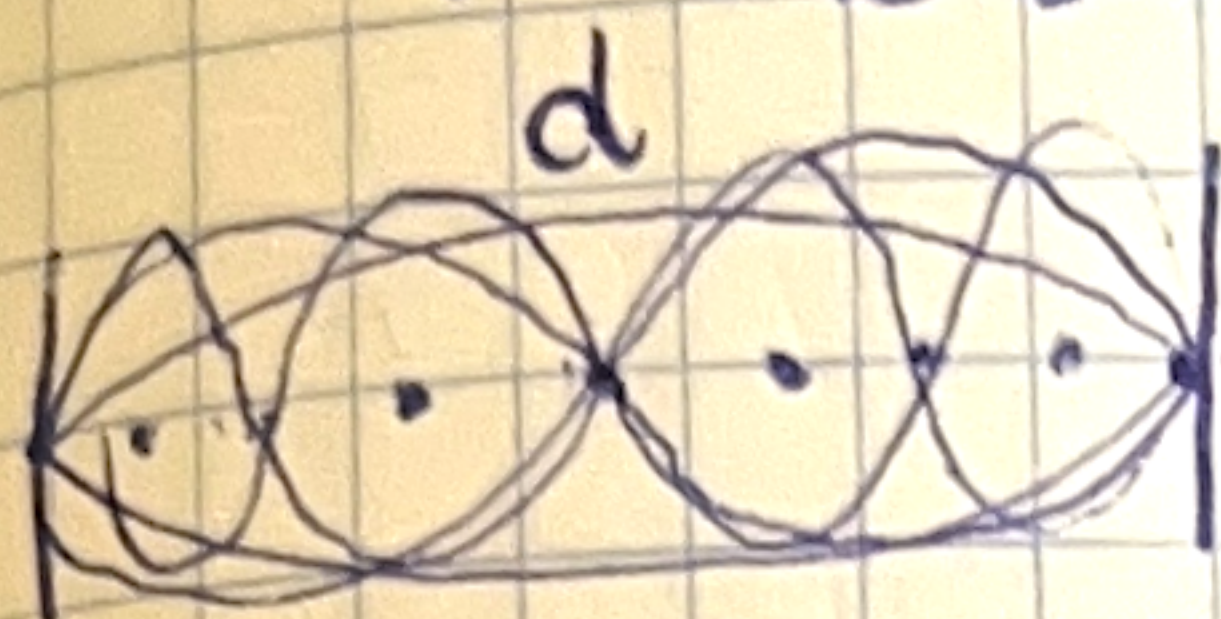


$$v = 340 \frac{m}{s} \quad f_1 = 800 \text{ Hz}$$

$$v = f \lambda$$



$$d = \frac{1}{2} \lambda_1$$

$$2 \cdot \frac{1}{4} = \frac{1}{2}$$

$$\lambda_1 = \frac{v}{f_1} = \frac{340 \frac{m}{s}}{800 \text{ Hz}} =$$

$$d = \frac{1}{2} \cdot 0.425 \text{ m} = 0.2125 \text{ m}$$

$$= 0.425 \text{ m}$$

$$f_2 = ? \quad \lambda_2 = \frac{v}{f_2}$$

$$\lambda_2 \quad d = 4 \cdot \frac{1}{4} \lambda_2 = \lambda_2 = 0.2125 \text{ m}$$

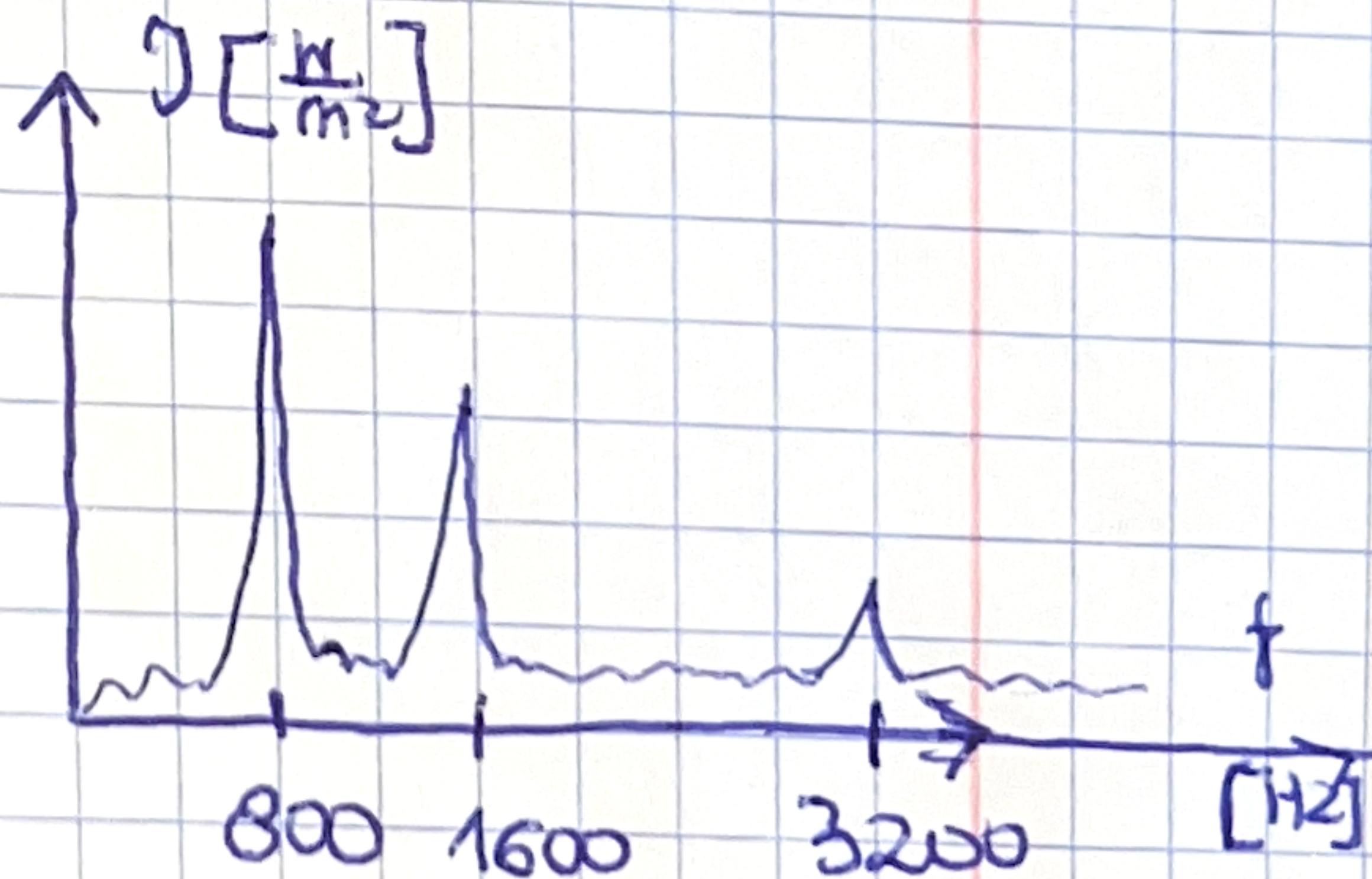
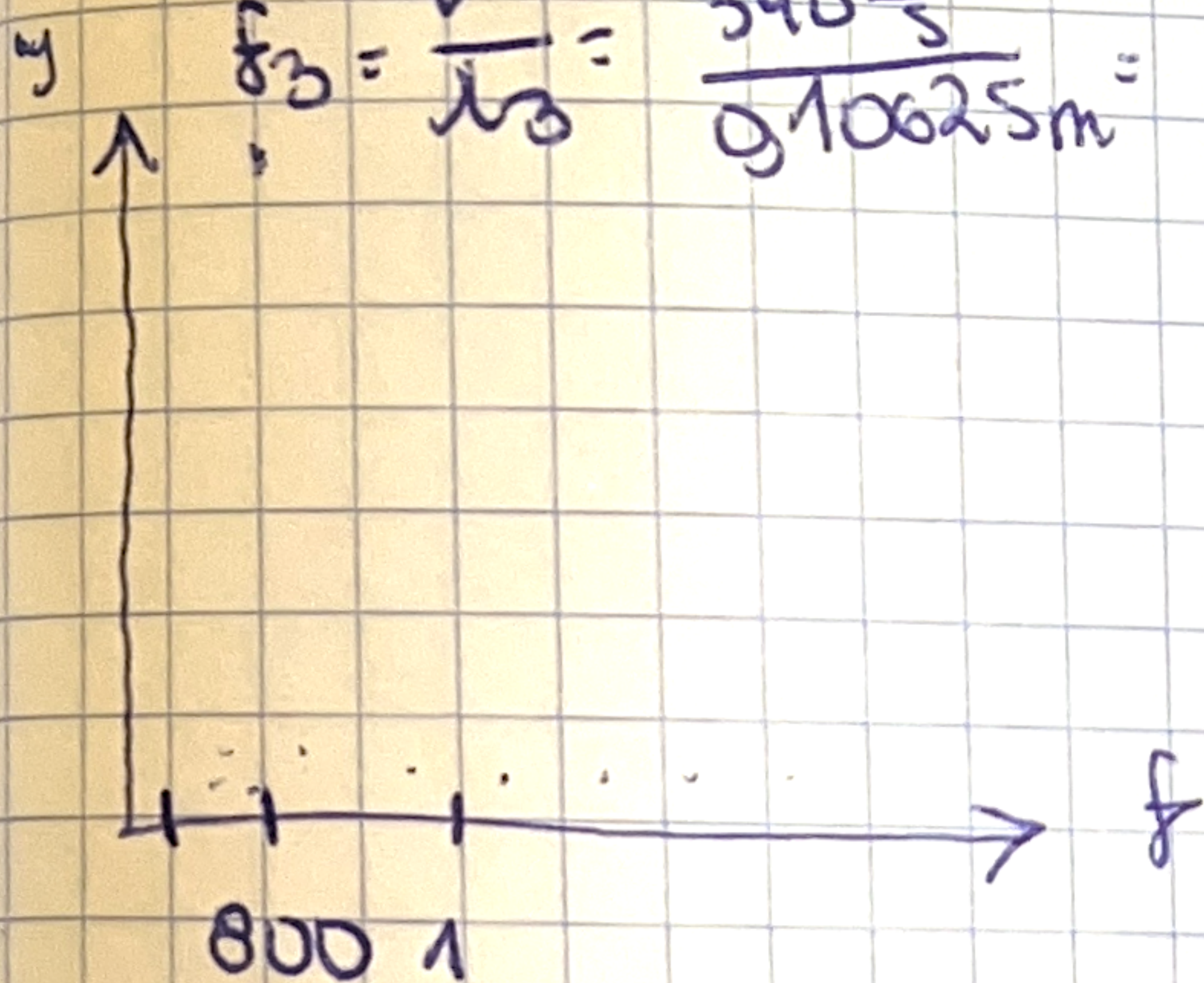
$$f_2 = \frac{v}{\lambda_2} = \frac{340 \frac{m}{s}}{0.2125 \text{ m}} = 1600 \text{ Hz}$$

$$f_3 = ?$$

$$d = 8 \cdot \frac{1}{4} \lambda_3 = 2 \lambda_3$$

$$\lambda_3 = \frac{d}{2} = 0.10625 \text{ m}$$

$$f_3 = \frac{v}{\lambda_3} = \frac{340 \frac{m}{s}}{0.10625 \text{ m}} = 3200 \text{ Hz}$$



$$w = \frac{2}{\pi} \cdot \pi \cdot m$$