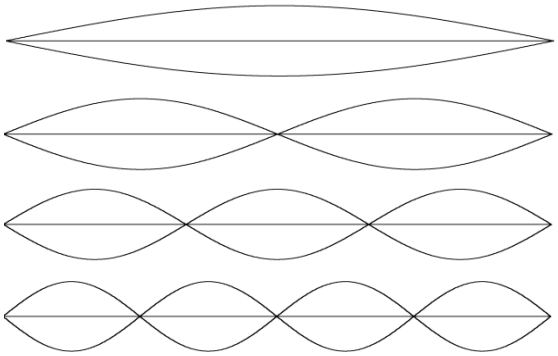
Svingningsbilleder

Svingende streng



$$\lambda_1 = \frac{2 \cdot L}{1} \qquad f_1$$

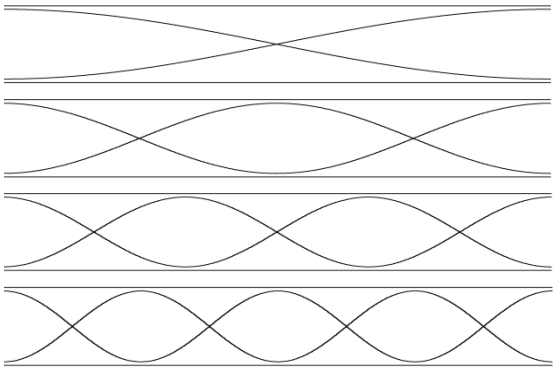
$$\lambda_2 = \frac{2 \cdot L}{2} \qquad f_2 = 2 \cdot f_1$$

$$\lambda_3 = \frac{2 \cdot L}{3} \qquad f_3 = 3 \cdot f_1$$

$$\lambda_4 = \frac{2 \cdot L}{4} \qquad f_4 = 4 \cdot f_1$$

$$\lambda_n = \frac{2 \cdot L}{n} \qquad f_n = n \cdot f_1$$

Helåbent rør



$$\lambda_1 = \frac{2 \cdot L}{1} \qquad f_1$$

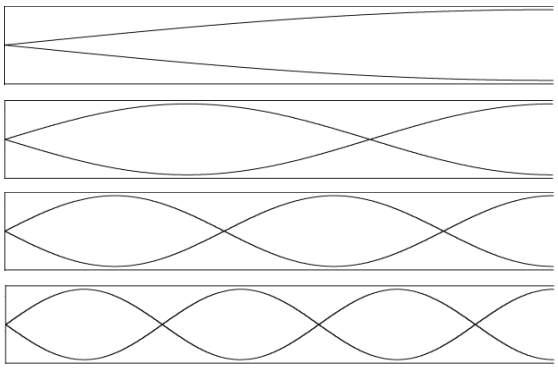
$$\lambda_2 = \frac{2 \cdot L}{2} \qquad f_2 = 2 \cdot f_1$$

$$\lambda_3 = \frac{2 \cdot L}{3} \qquad f_3 = 3 \cdot f_1$$

$$\lambda_4 = \frac{2 \cdot L}{4} \qquad f_4 = 4 \cdot f_1$$

$$\lambda_n = \frac{2 \cdot L}{n} \qquad f_n = n \cdot f_1$$

Halvåbent rør



$$\lambda_1 = \frac{4 \cdot L}{1} \qquad f_1$$

$$\lambda_2 = \frac{4 \cdot L}{3} \qquad f_2 = 3 \cdot f_1$$

$$\lambda_3 = \frac{4 \cdot L}{5} \qquad f_3 = 5 \cdot f_1$$

$$\lambda_4 = \frac{4 \cdot L}{7} \qquad f_4 = 7 \cdot f_1$$

$$\lambda_n = \frac{4 \cdot L}{2n-1} \qquad f_n = (2n-1) \cdot f_1$$