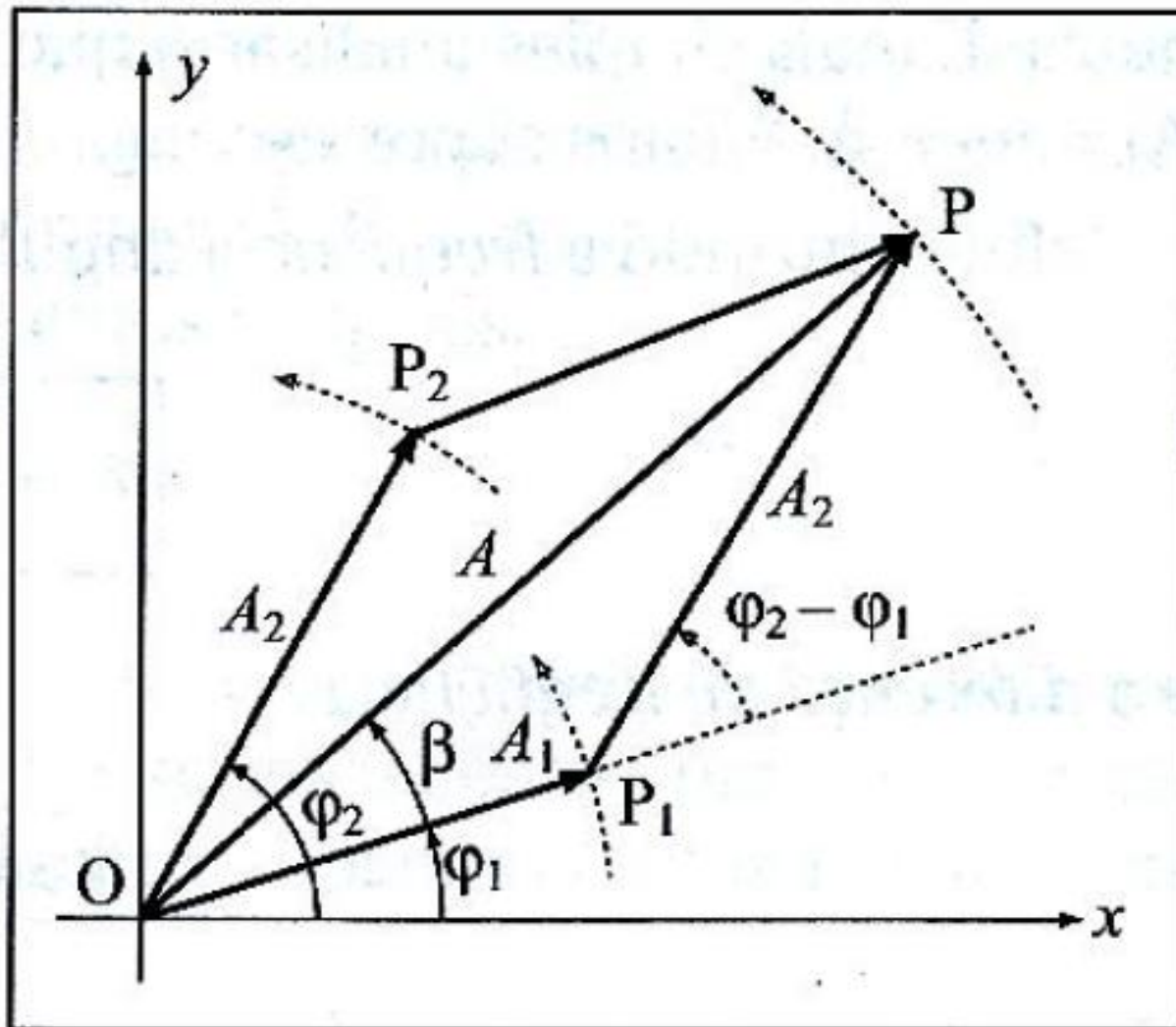
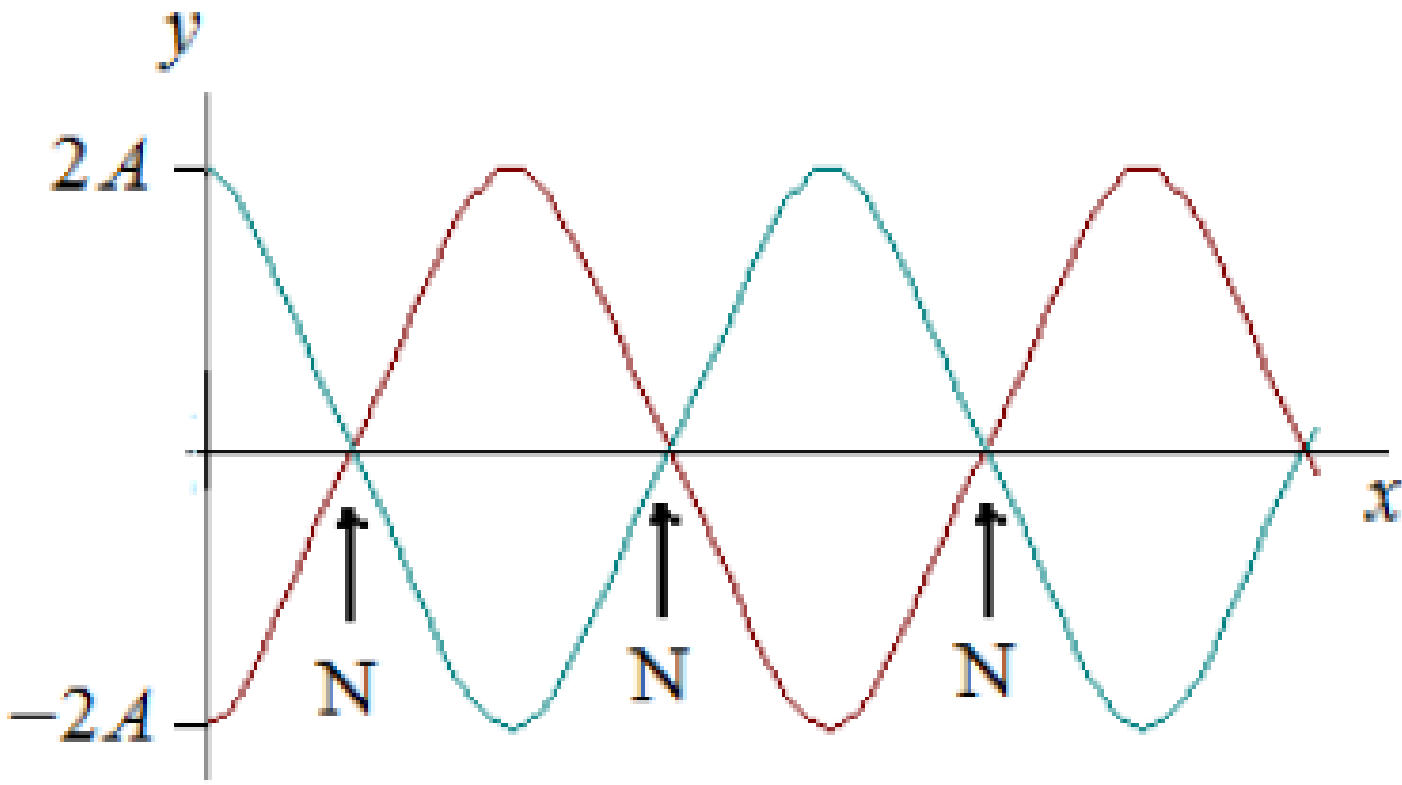


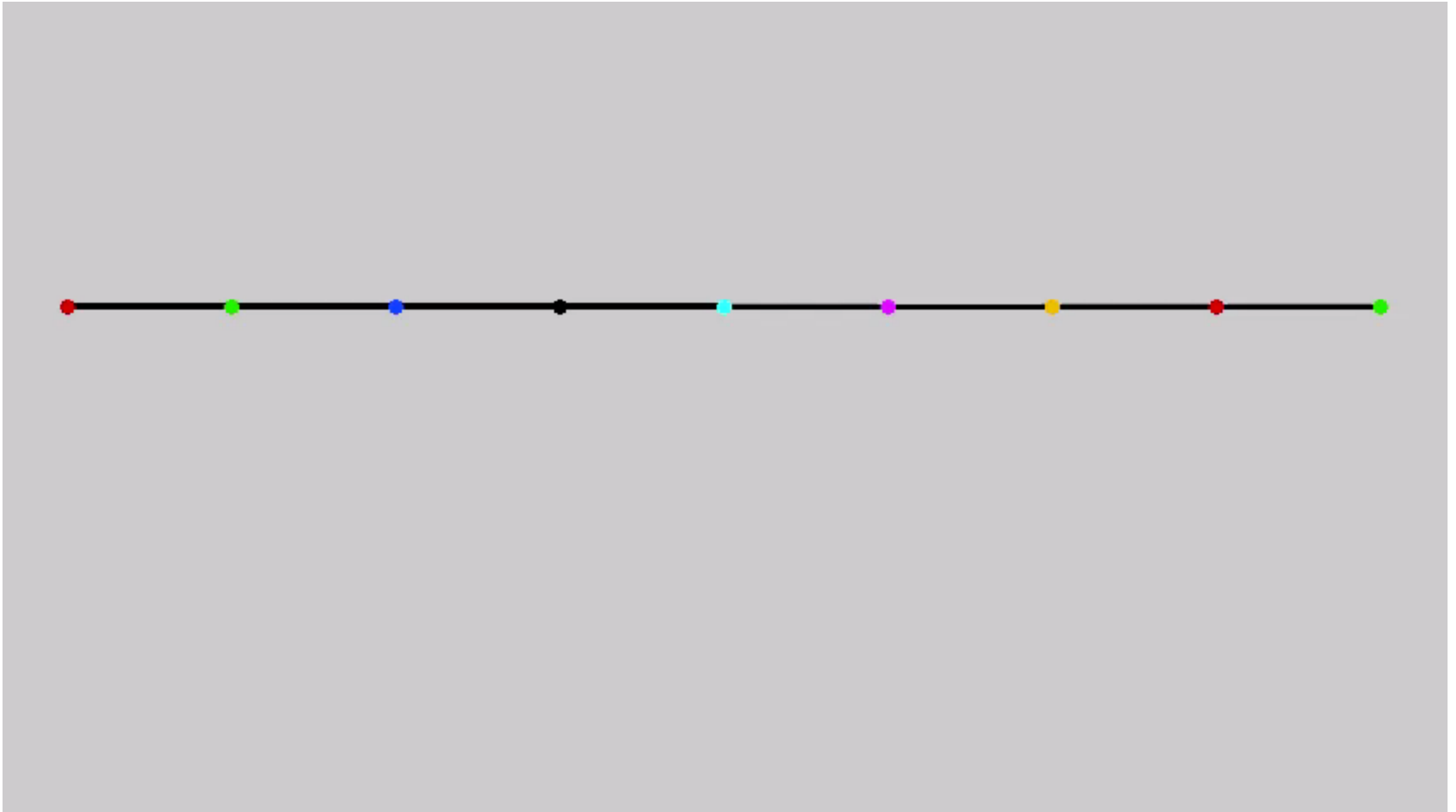
Superposição de movimentos harmônicos simples

(a) Mesmo sentido e mesma frequência

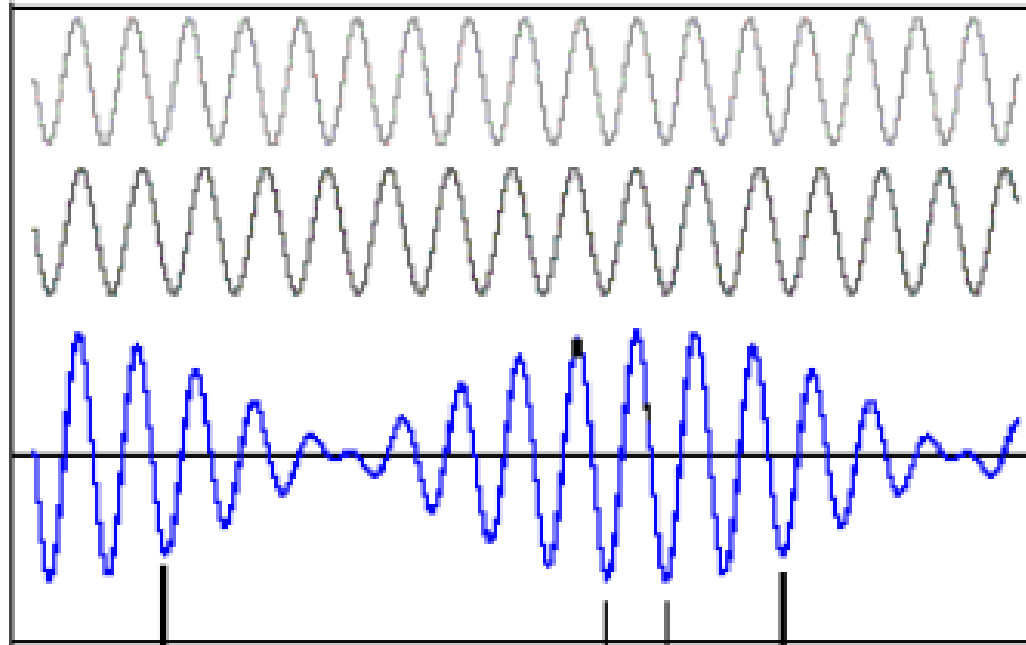




Ondas Estacionárias



Batimento

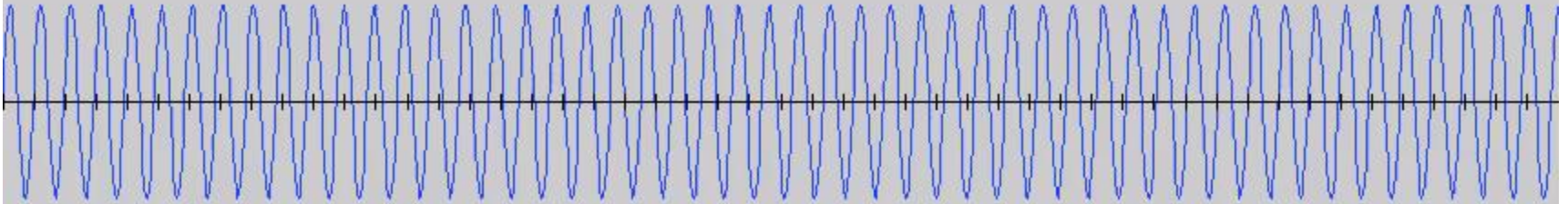


$$\lambda = \frac{2\pi}{k}$$

$$\lambda_{\text{mod}} = \frac{2\pi}{\Delta k/2} = \frac{4\pi}{\Delta k}$$

Velocidade de fase e velocidade de grupo

$$\begin{aligned}k_1/\bar{k} &= 1,025 \\w_1/\bar{w} &= 1,025 \\v_1/\bar{v} &= 1,000\end{aligned}$$



Velocidade de fase e velocidade de grupo

$$k_1/\bar{k} = 1,025$$
$$w_1/\bar{w} = 1,012$$
$$v_1/\bar{v} = 0,988$$

