PAG. 900 N 14 (REPRISE)

$$2q\cos\left(\frac{\Delta\varphi}{2}\right)=q$$

$$\cos\left(\frac{\Delta\varphi}{2}\right)=\frac{1}{2}$$

$$\frac{\Delta\varphi}{2}=\pm\arccos\frac{1}{2}+2k\pi$$

$$\frac{\Delta\varphi}{2}=\pm\frac{\pi}{3}+2k\pi$$

$$\Delta\varphi=\pm\frac{2}{3}\pi+4k\pi$$

PAG. 900 N 7

$d = \frac{m}{V}$

$L = 3{,}0\ m \qquad S = 2{,}0\ cm^2 \qquad d = 8960\ \frac{kg}{m^3}$

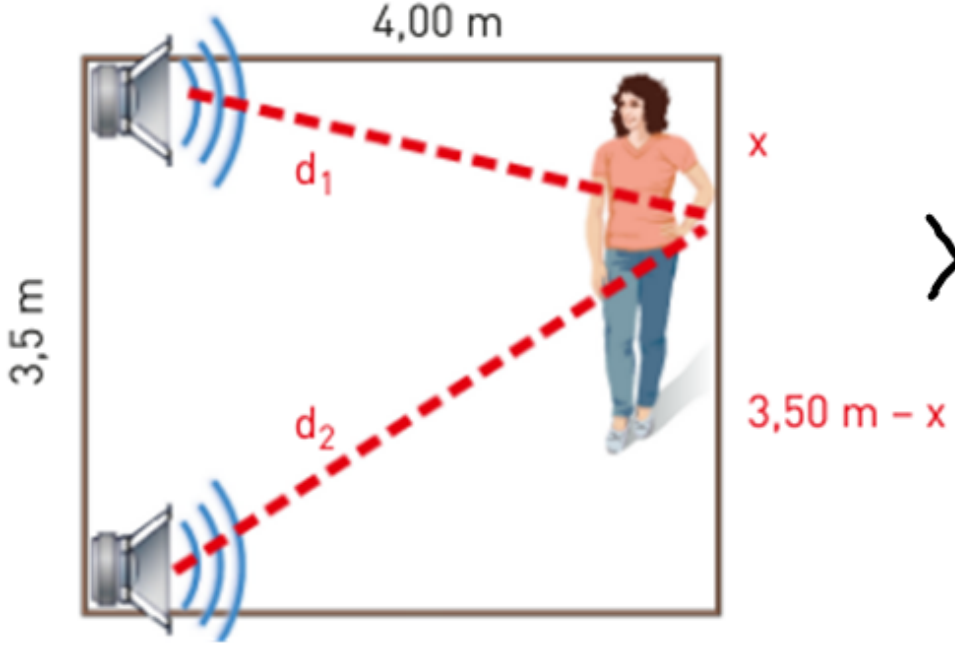
$f = 500\ Hz \qquad \lambda = 0{,}20\ m$

$$v = \sqrt{\frac{F_T}{d_L}}$$

$$F_T = v^2 d_L = \lambda^2 f^2 \frac{m}{L} = \lambda^2 f^2 \frac{d V}{L} = \lambda^2 f^2 \frac{d S \cancel{L}}{\cancel{L}} =$$

$$= 0{,}20^2 \cdot 500^2 \cdot 8960 \cdot 2{,}0 \cdot 10^{-4}\ N = 1{,}8 \times 10^4\ N$$

N 16



$f = 700\ Hz$

$v = 340\ \frac{m}{s}$

$\lambda = \frac{v}{f} =$

$= 0,4857\ m$

$$|d_1 - d_2| = \lambda$$

$$\left|\sqrt{x^2 + 4,00^2} - \sqrt{4,00^2 + (3,50-x)^2}\right| = 0,4857$$

Numerical solutions:

$x \approx 1.13914288907775\ldots$

$x \approx 2.36085711092225\ldots$

15 $f = 200\,Hz$ $v = 340\,\frac{m}{s}$

$\Delta\varphi = \frac{\pi}{3}$ $\Delta x = ?$

P •

• Q