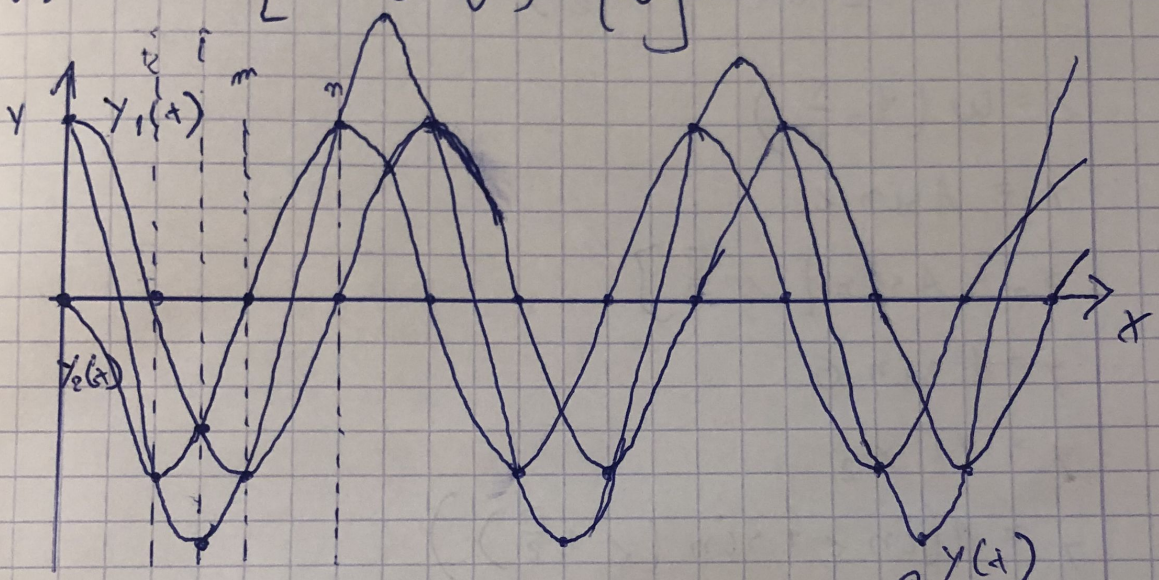
376.

ω

$\varphi_0 = \frac{\pi}{2}$

$y_1 = A \sin\left[\omega\left(t - \frac{x}{v}\right)\right]$

$y_2 = A \sin\left[\omega\left(t - \frac{x}{v}\right) + \varphi_0\right]$



$y_{w.0} = A + 0 = A$

$y_{w.k} = 0 - A = -A$

$y_{w.l} = -0{,}7A - 0{,}7A = -1{,}4A$

$y_{w.m} = -A - 0 = -A$

$y_{w.k} = 0 + A = A$

$y(x) = y_1(x) + y_2(x)$

б)

$A_w = 1{,}4A$

$y_1 = A \sin\left[\omega\left(t - \frac{x}{v}\right)\right]$

$y_2 = A \sin\left[\omega\left(t - \frac{x}{v}\right) + \frac{\pi}{2}\right]$

$\varphi = \omega\left(t - \frac{x}{v}\right)$

$y_1 = A \sin \varphi$

$y_2 = A \sin\left[\varphi + \frac{\pi}{2}\right]$

$y = A' \sin \theta$

$y = y_1 + y_2$

$y = A\left(\sin \varphi + \sin\left(\varphi + \frac{\pi}{2}\right)\right)$

$\sin x + \sin y = 2 \frac{\cos\left(\frac{x-y}{2}\right) \sin\left(\frac{x+y}{2}\right)}{2}$

$\Downarrow$

$y = A \cdot 2 \cos\left(\frac{\varphi - \left(\varphi + \frac{\pi}{2}\right)}{2}\right) \sin\left(\frac{\varphi + \varphi + \frac{\pi}{2}}{2}\right)$

$y = A \cdot 2 \cos\left(\frac{-\frac{\pi}{2}}{2}\right) \sin\left(\varphi + \frac{\pi}{4}\right)$

$y = 2A \cos\left(-\frac{\pi}{4}\right) \sin\left(\varphi + \frac{\pi}{4}\right)$

$\cos(-x) = \cos x$

$\Downarrow$

$y = 2A\cos\left(\frac{\pi}{4}\right)\sin\left(\omega t + \frac{\pi}{4}\right)$

$A' = 2A\cos\left(\frac{\pi}{4}\right)$

$A' = 2A \cdot \frac{\sqrt{2}}{2}$

$A' = \sqrt{2}A$

$A' \approx 1{,}4A$

$+\frac{\pi}{2}\Big)$