

Valor medio de una senoidal en un semiperiodo positivo (asumiendo  $\theta = 0^\circ$ ):

$$\begin{aligned}
 Y_m &= \frac{1}{T/2} \int_0^{T/2} Y_{max} \cdot \sin(\omega \cdot t) dt = \\
 &= \frac{Y_{max}}{T/2} \cdot \frac{1}{\omega} \cdot \left[ -\cos(\omega \cdot t) \right]_0^{T/2} = \\
 &= \frac{Y_{max}}{\pi} \left[ -\cos\left(\underbrace{\omega \cdot \frac{T}{2}}_{=\pi}\right) - \cancel{[-\cos(0)]}^1 \right] = \\
 &= \frac{2 \cdot Y_{max}}{\pi} \approx 0,637 \cdot Y_{max}
 \end{aligned}$$