Respostas dos exercícios (Lista 3)

1. a) $\gamma = \pi/6$
   b) $v_o = -0{,}3$ m/s; $a_o = -0{,}26$ m/s^2
   c) $v = -0{,}574$ m/s; $a = -0{,}088$ m/s^2

2. a) $f = 3{,}0$ Hz
   b) $t = 0{,}083$ s

3. a) $f = 1{,}25$ Hz
   b) $E_T = 0{,}23$ J
   c) $y = (0{,}05\text{ m})\cos[(7{,}829\text{ rad/s})t]$; $v = (-0{,}391\text{ m/s})\text{sen}[(7{,}829\text{ rad/s})t]$
   d) $|v_{max}| = 0{,}391$ m/s

4. a) $\omega = 4\pi$ rad/s
   b) $y = (0{,}075\text{ m})\text{sen}[(27{,}9\text{ rad/m})x - (12{,}6\text{ rad/s})t]$
   c) $v = -0{,}913$ m/s

5. $I = 3{,}18\text{x}10^{-6}$ W/m^2; $\beta = 65$ dβ

6. $I = 0{,}316$ W/m^2

7. a) $\omega = 400\pi$ rad/s
   b) $v = 129{,}1$ m/s
   c) $k = 9{,}73$ rad/m

8. $v = 1037{,}6$ m/s; $\rho_{(He)} = 0{,}186$ Kg/m^3

9. a) $v = 1477{,}5$ m/s; $\lambda = 5{,}64$ m
   b) $v = 1960$ m/s