Respostas para os problemas das listas

Evaldo

Lista 1 (oscilador harmônico)

1) (a) 6.28 10^5 rad/s. (b) A = 1.59 mm.
2) (a) x = 3 m. (b) v = - 49 m/s. (c) a = -266.5 m/s^2. (d) $\theta = 19\ \pi / 3$ rad. (e) f = 1.5 Hz. (f) T = 0.667 s.
3) (a) f = 498.2 Hz. (b) Maior.
4) A = 3.1 cm.
5) A = 21.6 cm.
6) E = 0.0374 J.
7) (a) ¾. (b) ¼. (c) x = 0.707 A.
8) (a) V = 1.11 m/s. (b) A = 3.33 cm.
9) (a) l = 0.5 m. (b) Ec = 3.77 10^{-3} J.
10) 6%.
11) (a) k = 132.7 N/m. (b) T = 0.622 s. (c) f = 1.61 Hz. (d) A = 5 cm. (e) v_{max} = 0.505 m/s.
12) m = 1.6 kg