HW26a

Sunday, December 11, 2016 8:50 PM

1. $A = 3\,cm$

$\lambda = 2.4\,m$

$f = 5\,Hz$

$v = 12\,\frac{m}{s}$

pos. x-dir

$v_{ymax} = 0.94\,\frac{m}{s}$

2.

$$v_{ymax} = \frac{2\pi A}{\lambda}\sqrt{\frac{T}{M/L}}$$

3.

$$f'' = f_s\,\frac{v + v_B}{v - v_B} = 45\,Hz\,\frac{343\,\frac{m}{s} + 8\,\frac{m}{s}}{343\,\frac{m}{s} - 8\,\frac{m}{s}} = 46.7\,kHz$$

4. 325 Hz, 242 Hz