

20.15. Visualize: Please refer to Figure Ex20.15.

Solve: The amplitude of the wave is the maximum displacement which is 4.0 cm. The wavelength is the distance between two consecutive peaks, which gives $\lambda = 14 \text{ m} - 2 \text{ m} = 12 \text{ m}$. The frequency of the wave is

$$f = \frac{v}{\lambda} = \frac{24 \text{ m/s}}{12 \text{ m}} = 2.0 \text{ Hz}$$