A transverse wave is given by

\[ y(x,t) = (6.50 \text{ mm}) \cos \frac{2\pi}{28.0 \text{ cm}} \frac{x - t}{0.03605} \]  

\[(\text{eqn. 15.4, p 553})\]

\[ y(x,t) = A \cos \frac{2\pi}{\lambda} \left( \frac{x - t}{\tau} \right) \]  

\[ \uparrow + x\text{-direction} \]

Determine

(a) Amplitude: \( A = 6.50 \text{ mm} \) by direct comparison

(b) Wavelength: \( \lambda = 28.0 \text{ cm} \)

(c) Frequency: \( f = \frac{1}{\tau} = \frac{1}{0.03605} = 27.8 \text{ s}^{-1} = 27.8 \text{ Hz} \)

(d) Speed of propagation: \( v = \lambda f \)

\[ v = (28.0 \times 10^{-2} \text{ m})(27.8 \text{ cyc/s}) \]

\[ v = 7.78 \text{ m/s} \]

(e) Direction of propagation:

by comparison of signs of terms to eqn above

we see this is a wave propagation in \(+x\)-direction

5 pts