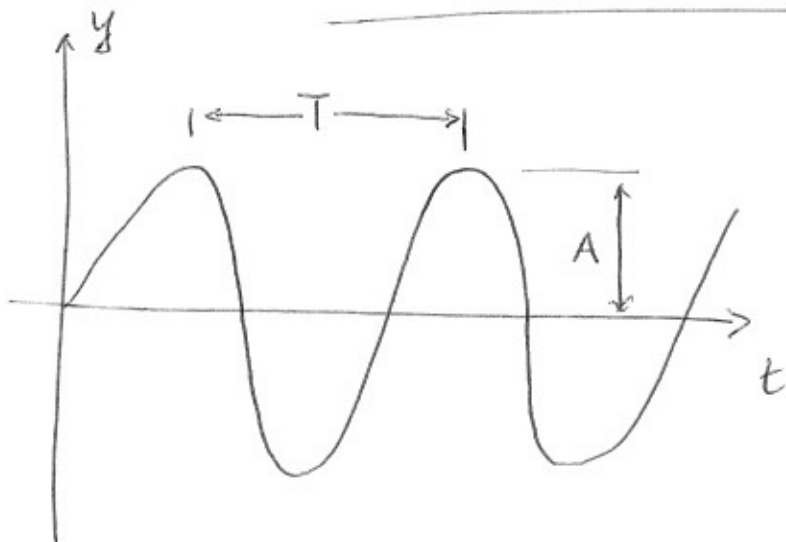


# Sinusoidal waves.

(Please review Section 16.2)

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$$y(x,t) = A \sin(kx - \omega t)$$

$$k \equiv \frac{2\pi}{\lambda}$$

$$\omega \equiv \frac{2\pi}{T}$$

velocity of the wave:

$$v = \frac{\lambda}{T}$$

or 
$$v = \frac{\omega}{k} = \lambda f$$

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optional: The linear wave equation  
(Section 16.6)

$$\frac{\partial^2 y}{\partial x^2} = \frac{1}{v^2} \cdot \frac{\partial^2 y}{\partial t^2}$$