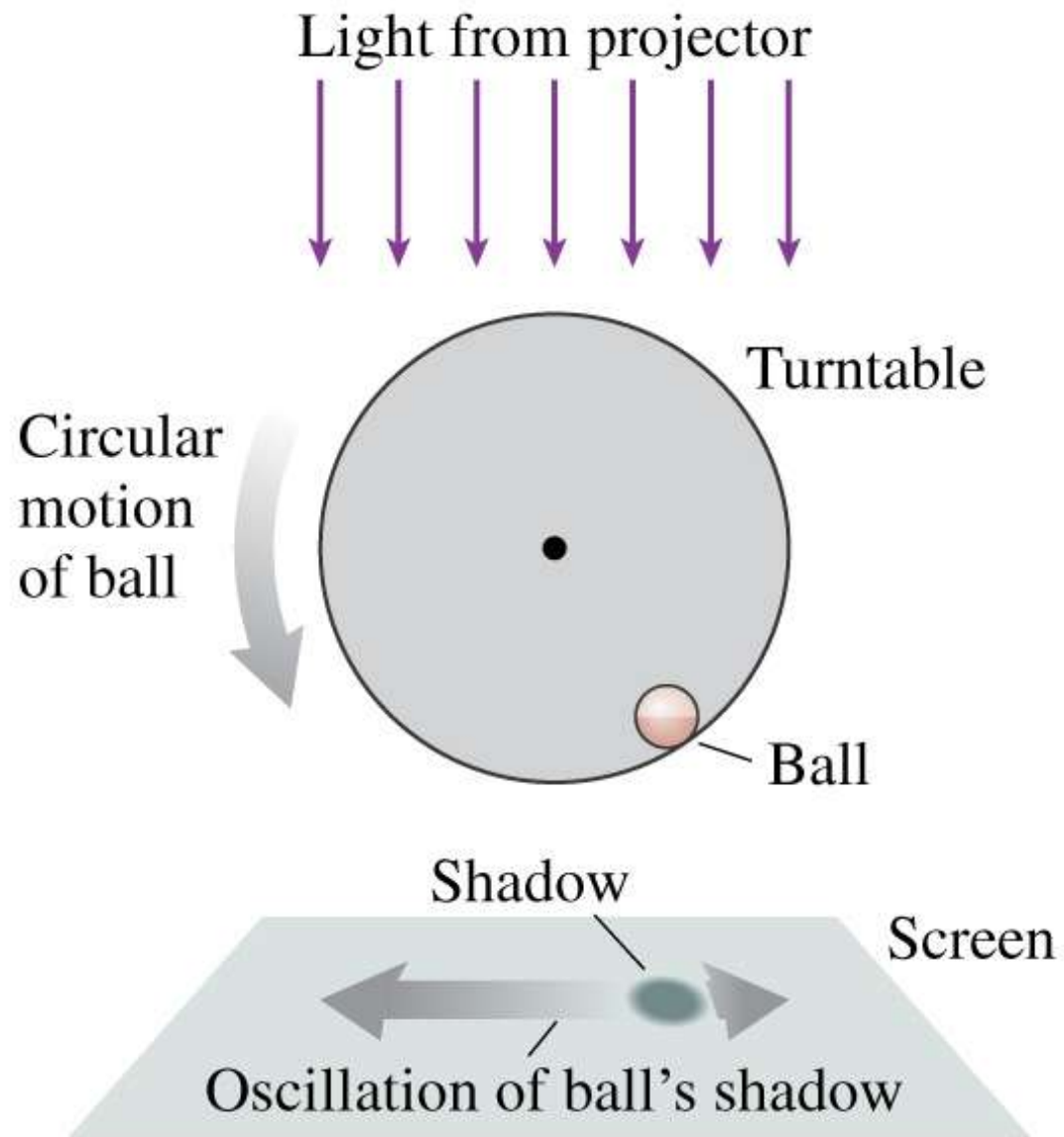
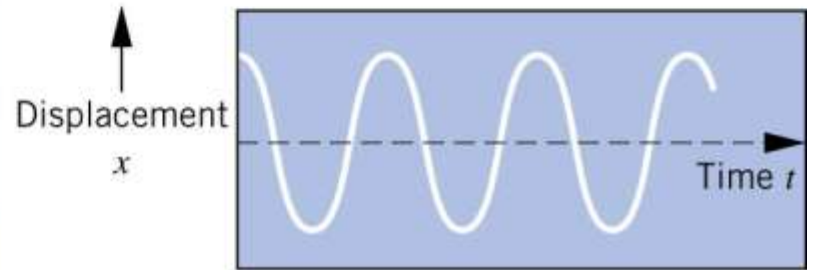
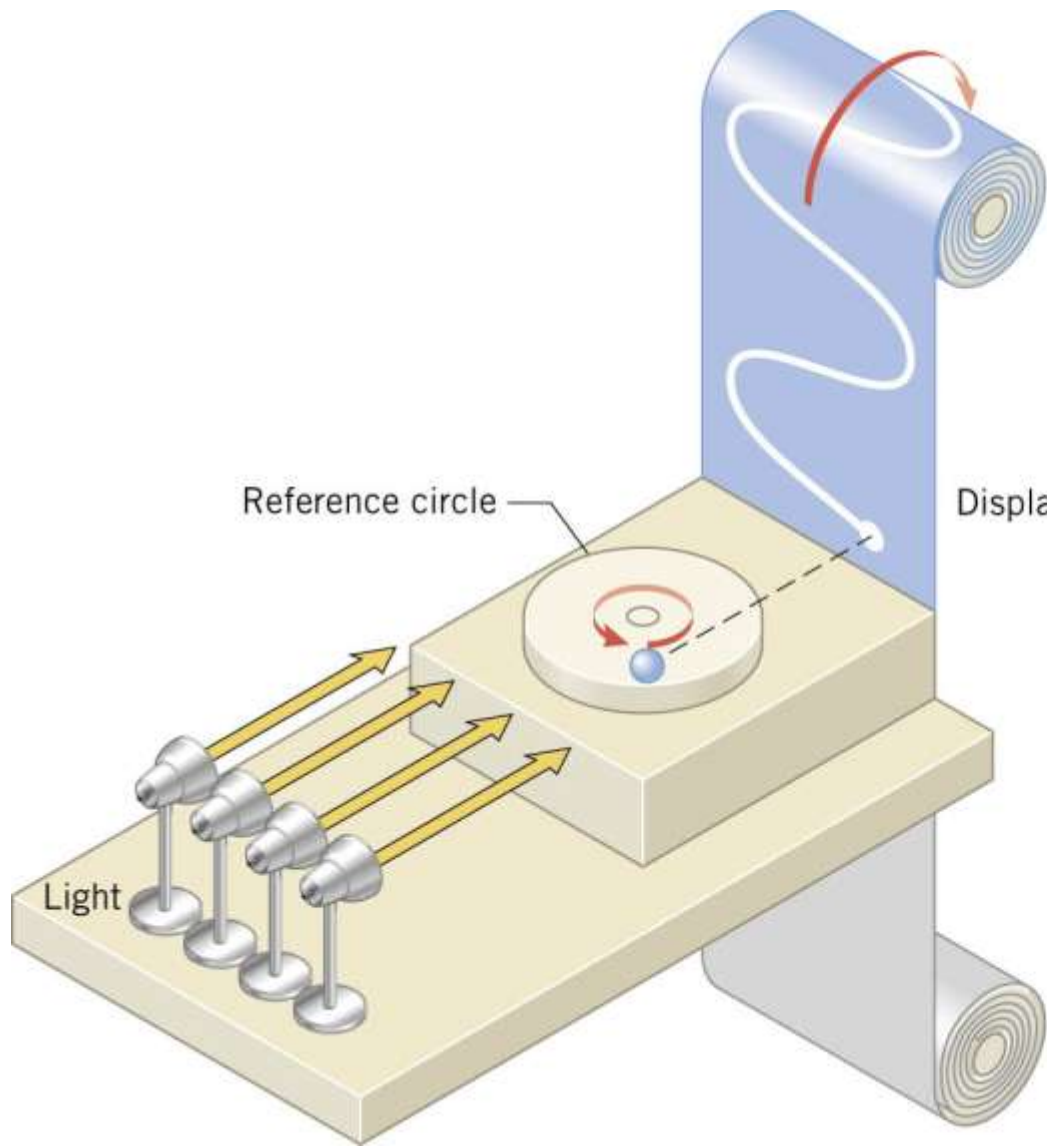
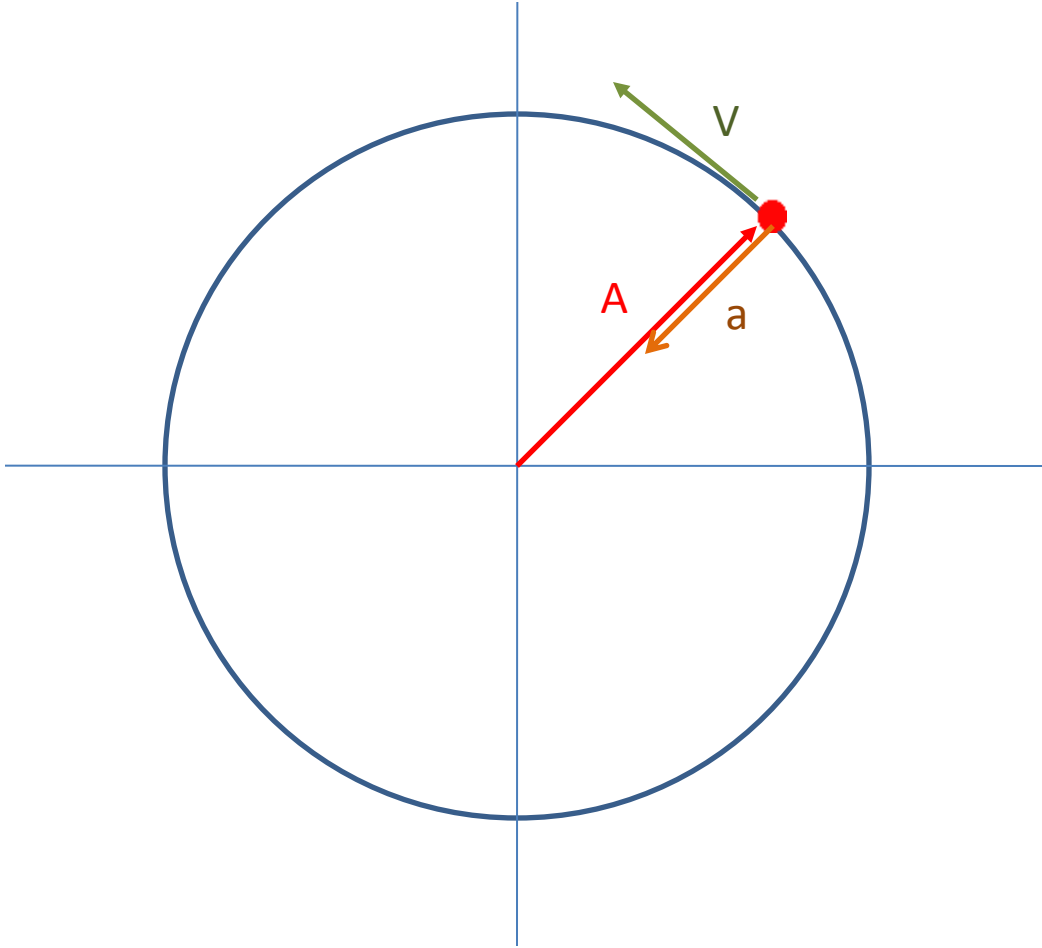


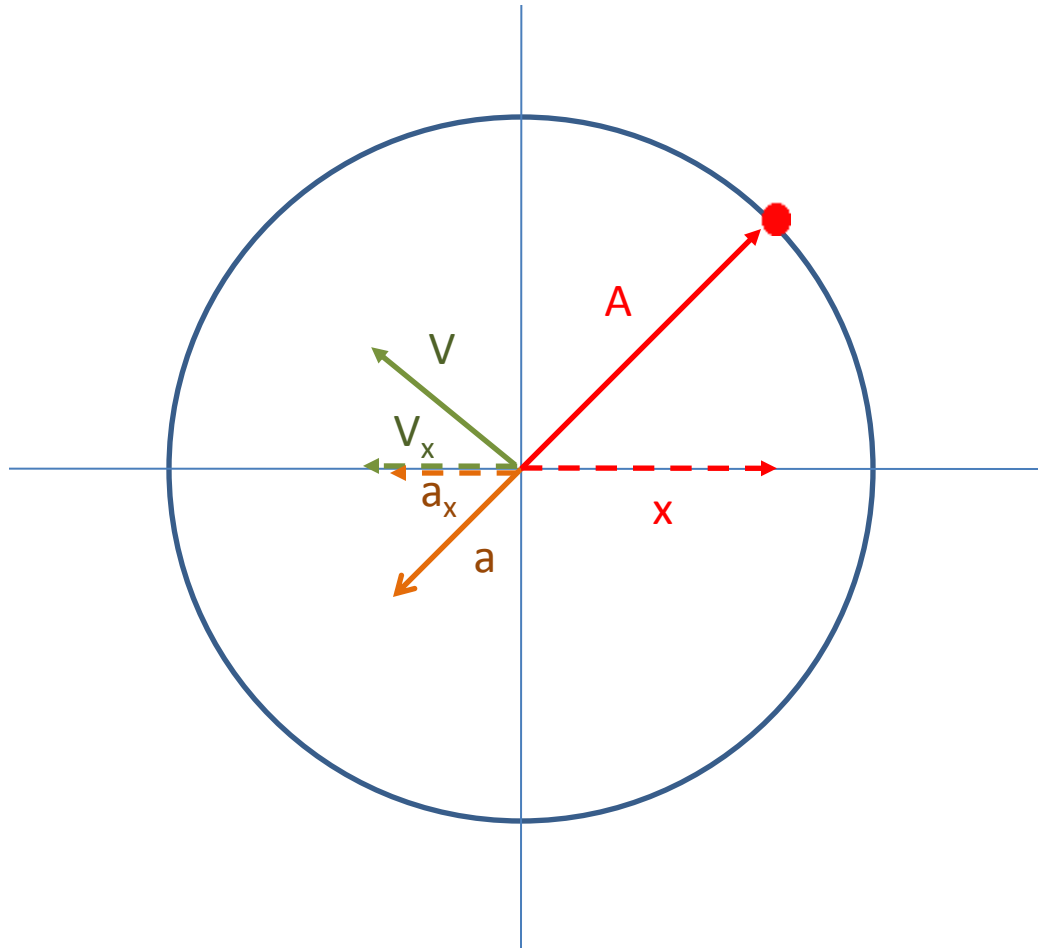
[Questions](#)

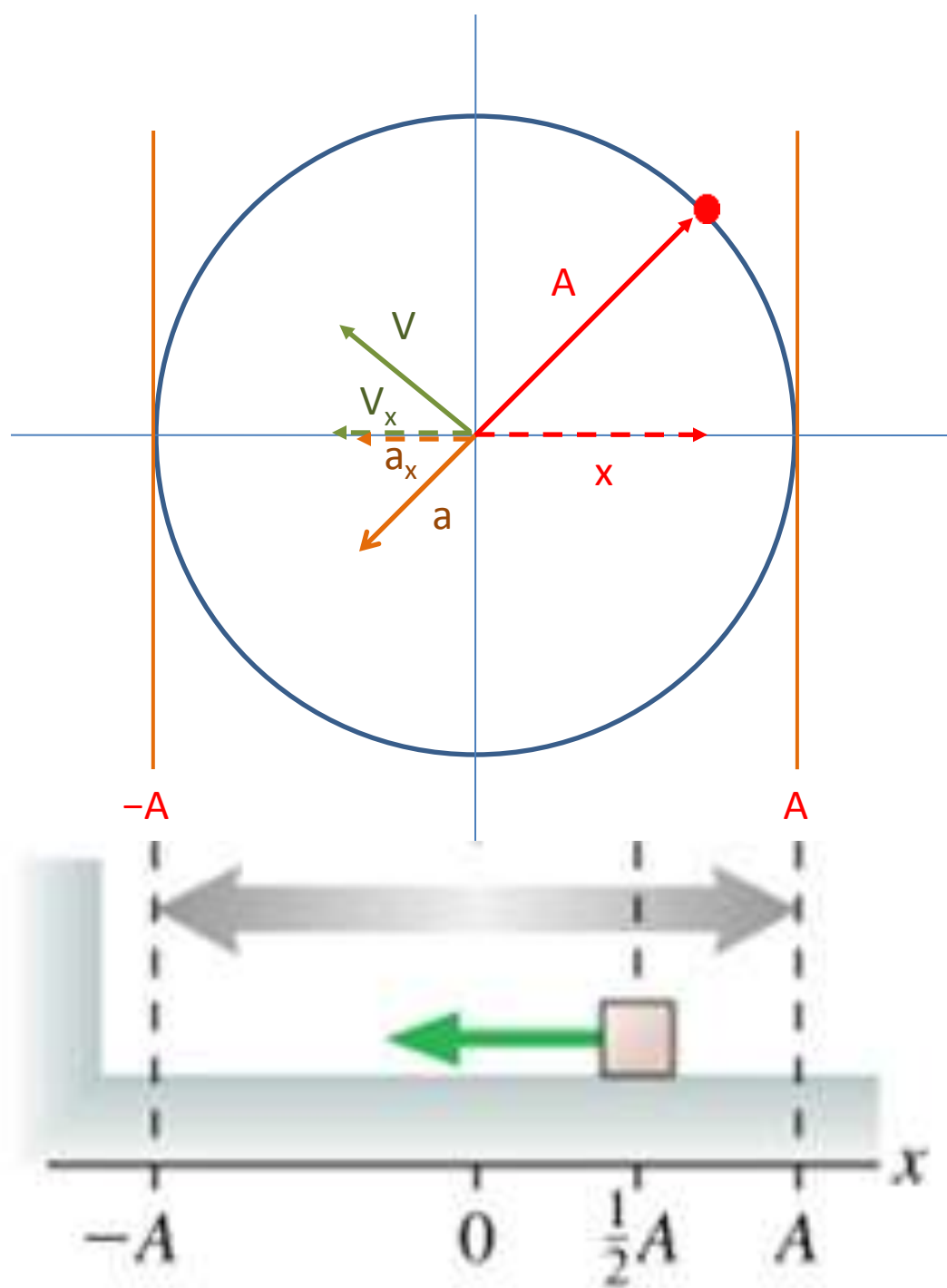
(a)

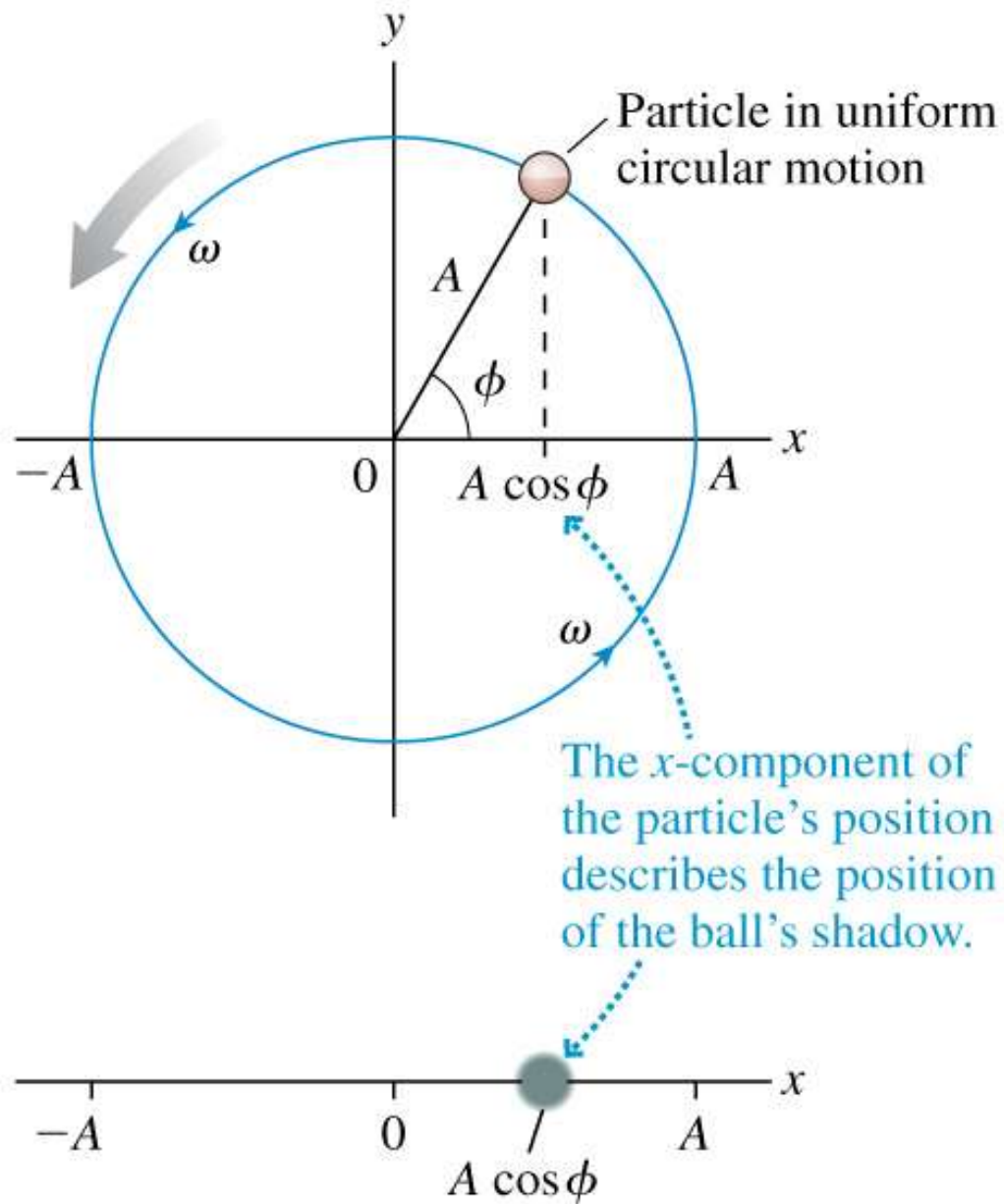




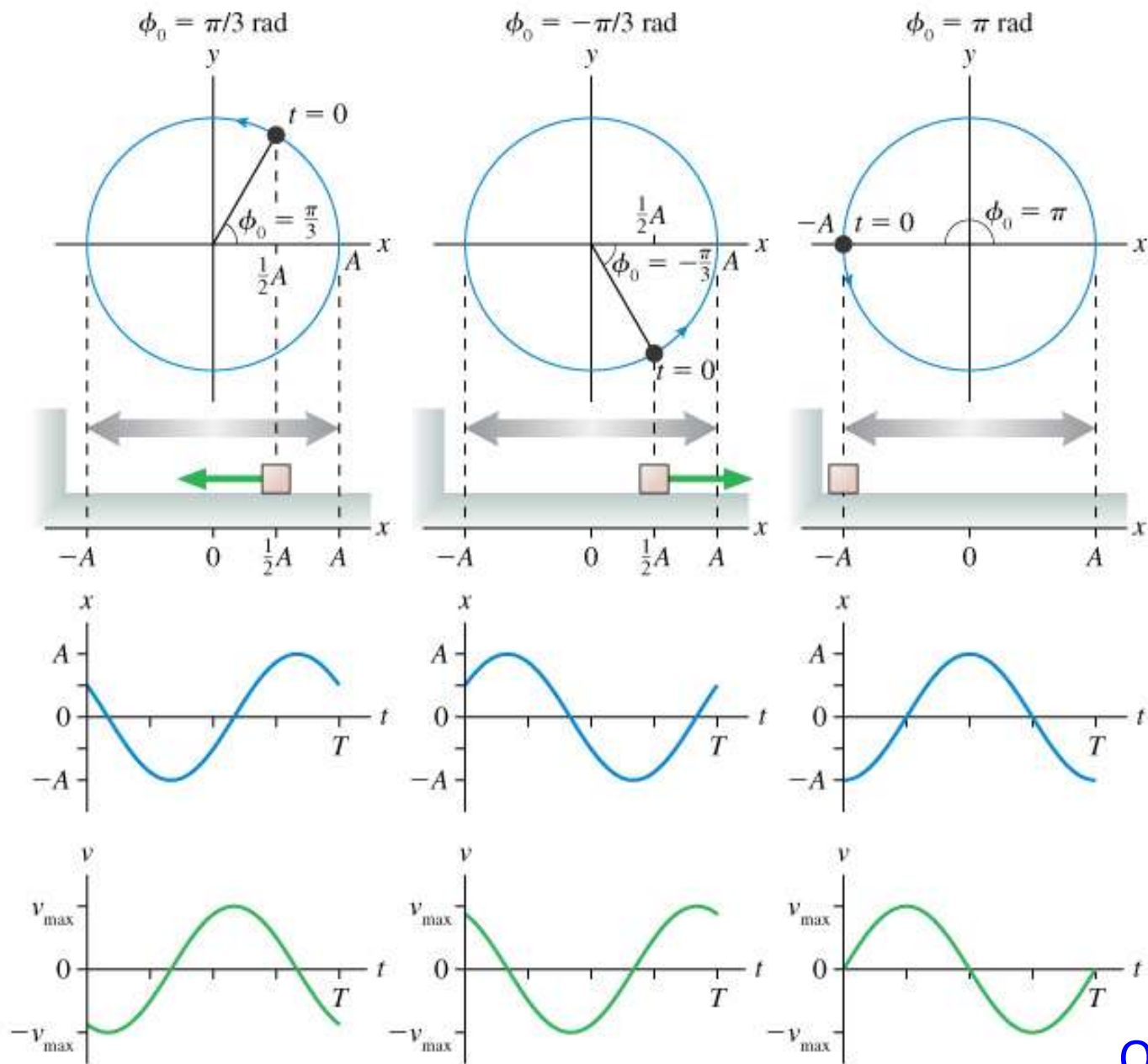






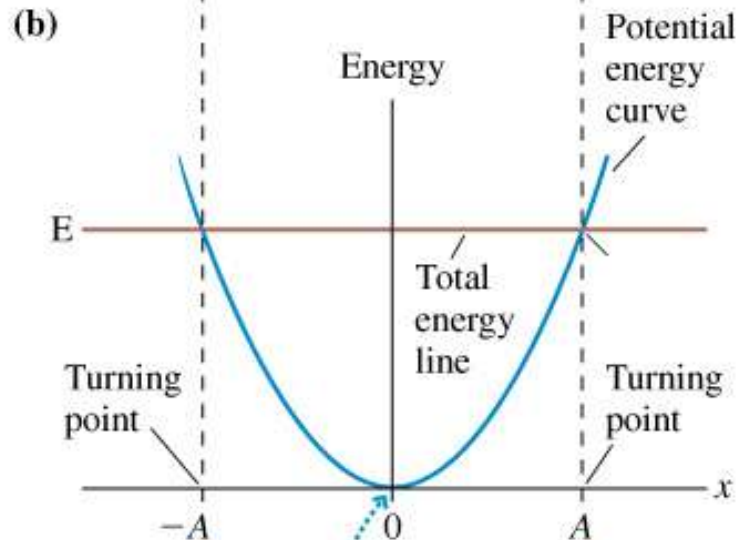
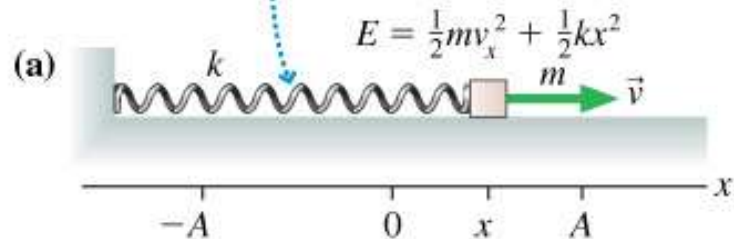






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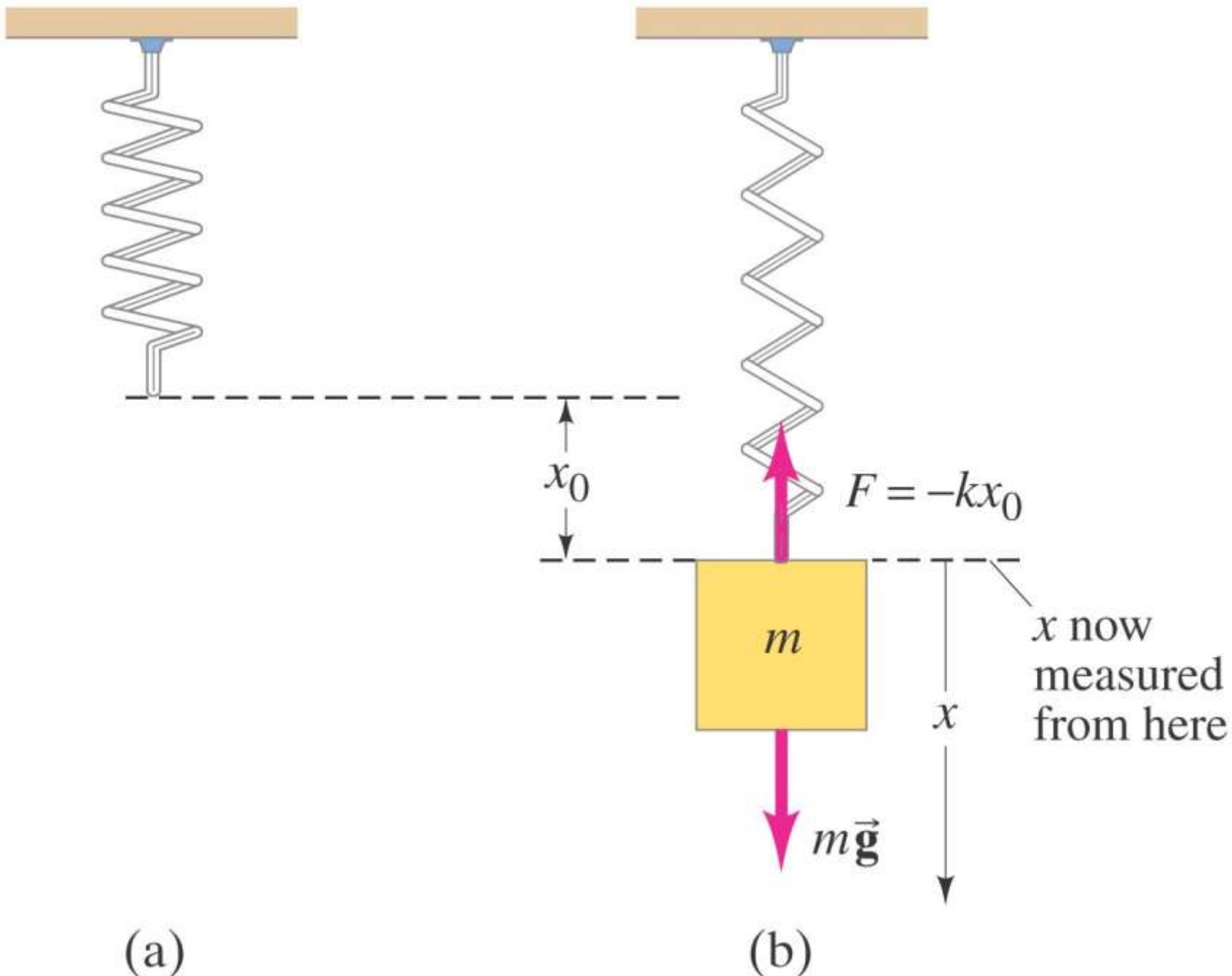
Energy is transformed between kinetic and potential, but the total mechanical energy  $E$  doesn't change.



Energy is purely kinetic.

Energy is purely potential.

[Questions](#)



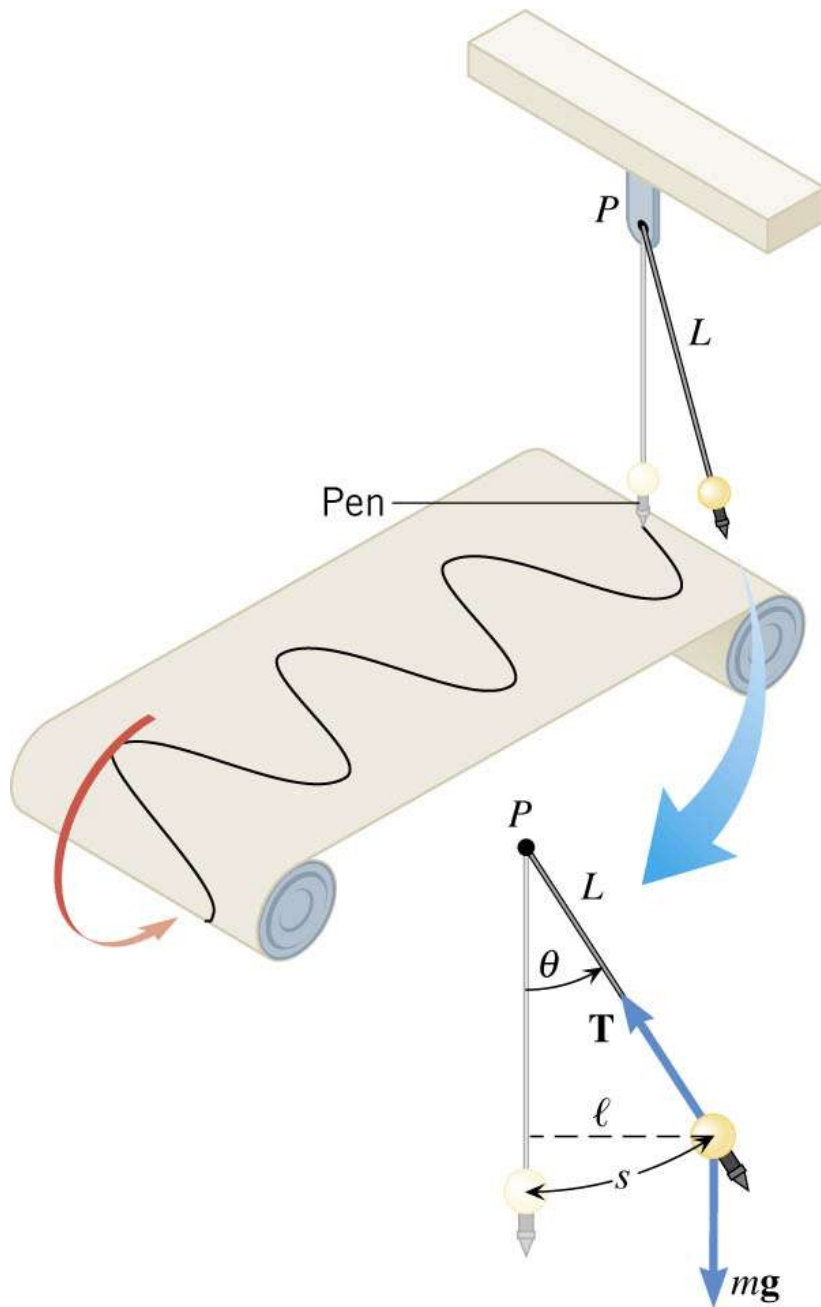
(a)

(b)

# Simple Pendulum

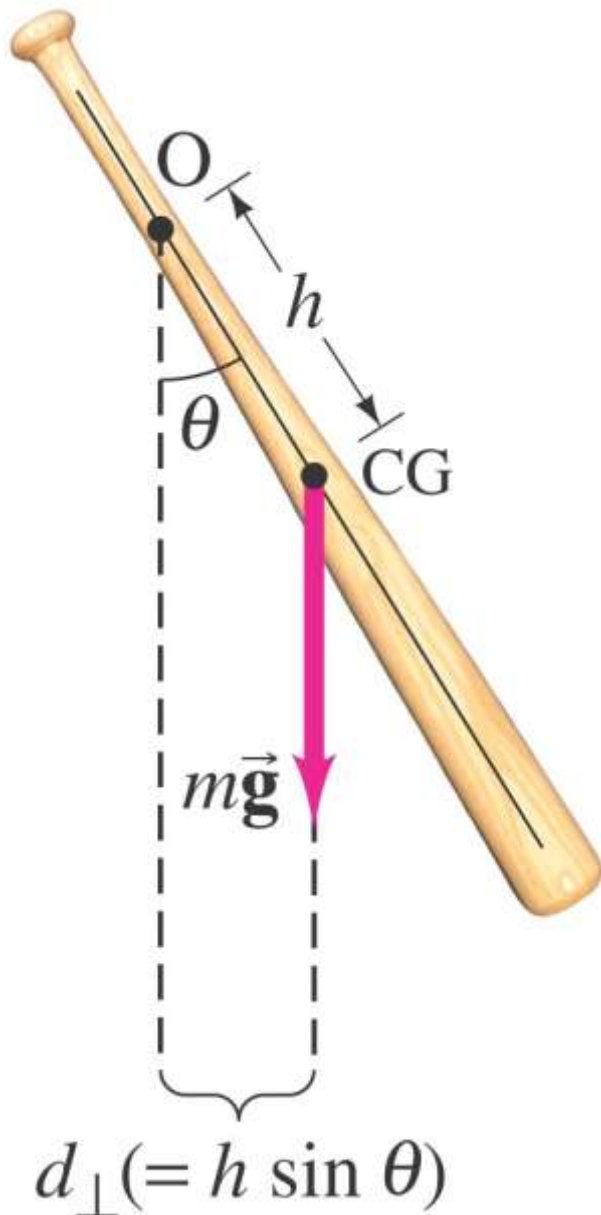
$$\omega = \sqrt{\frac{g}{L}}$$

- $\omega$  and  $T$  are indpt of  $S$



[Questions](#)

# Physical Pendulum

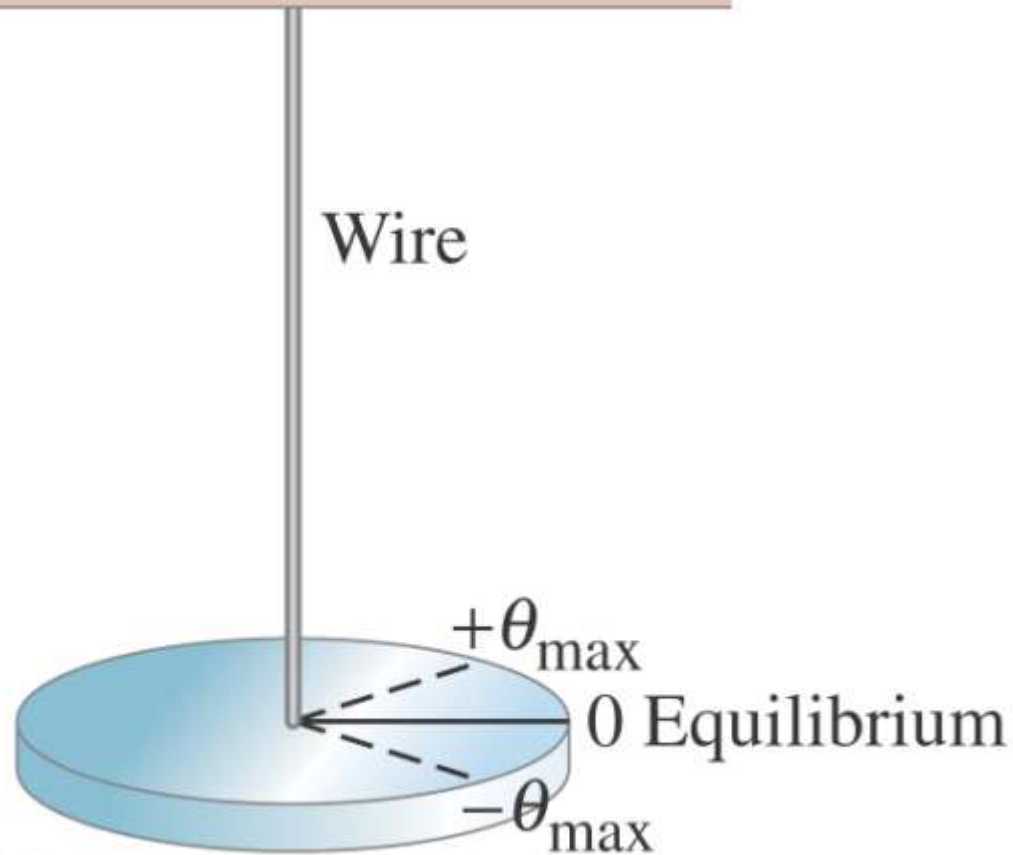


$$\omega = \sqrt{\frac{mgh}{I}},$$

$I$  is rotational inertia

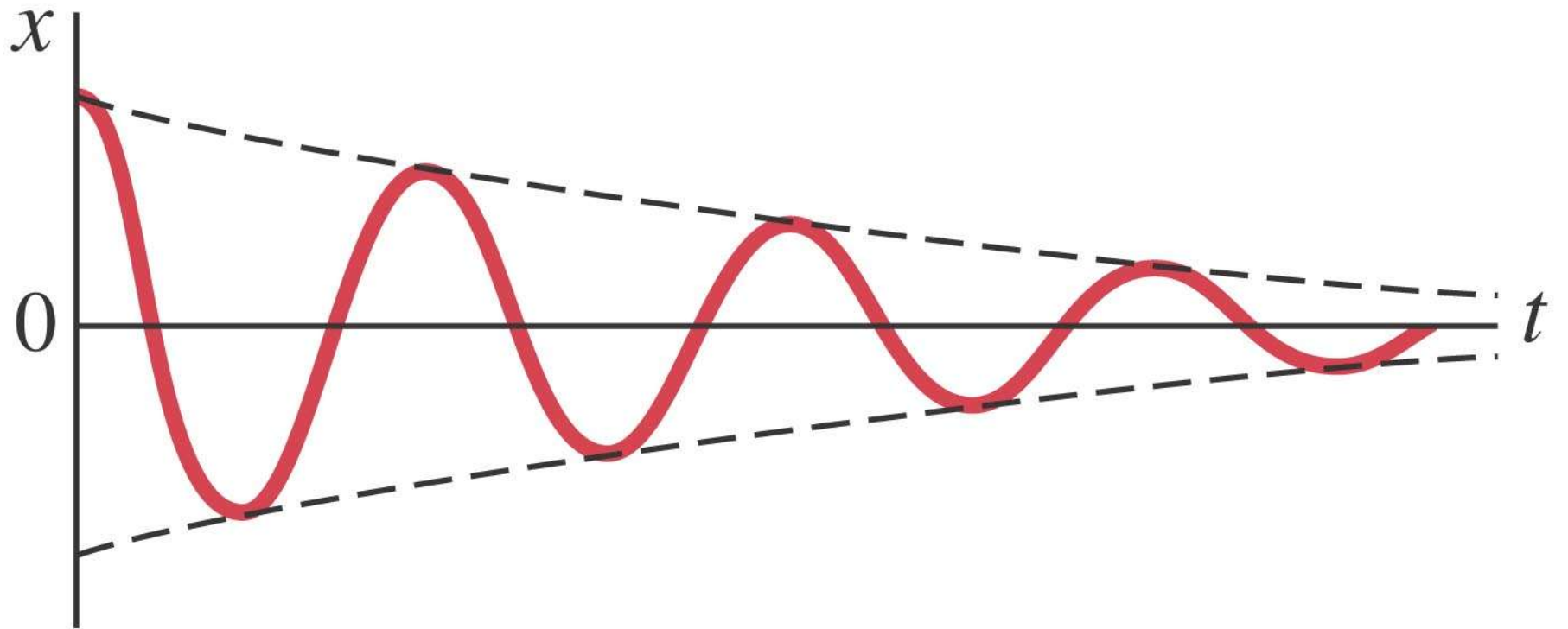
- $I$  is  $I$  wrt point  $O$
- $I = I_{\text{CM}} + Mh^2$
- Model Limbs

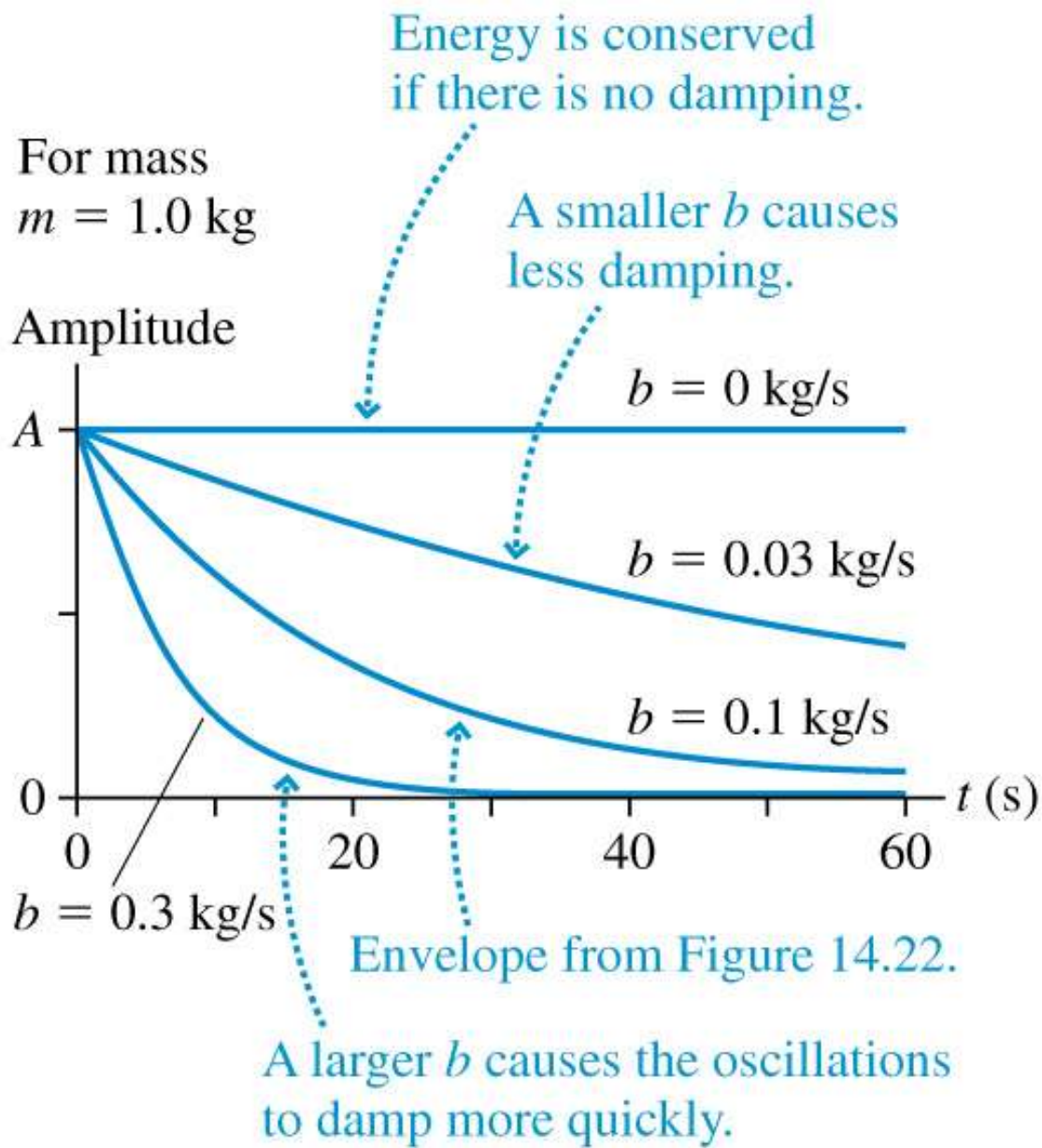
# Torsional Pendulum



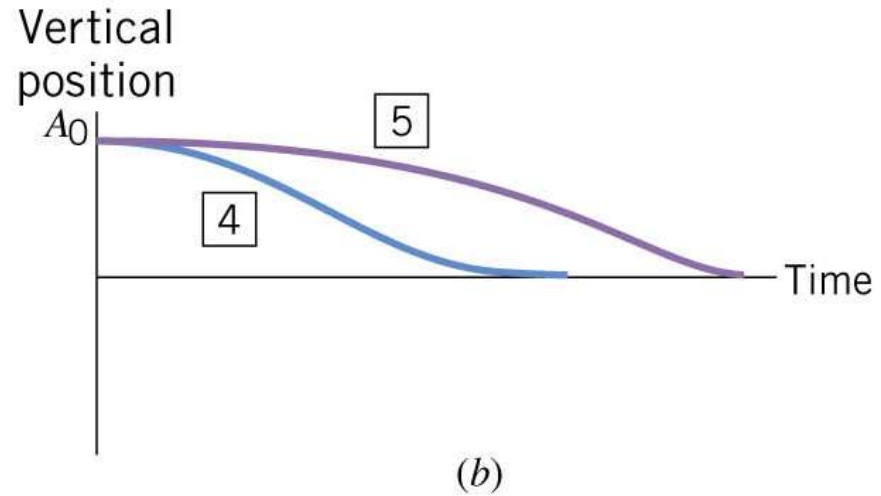
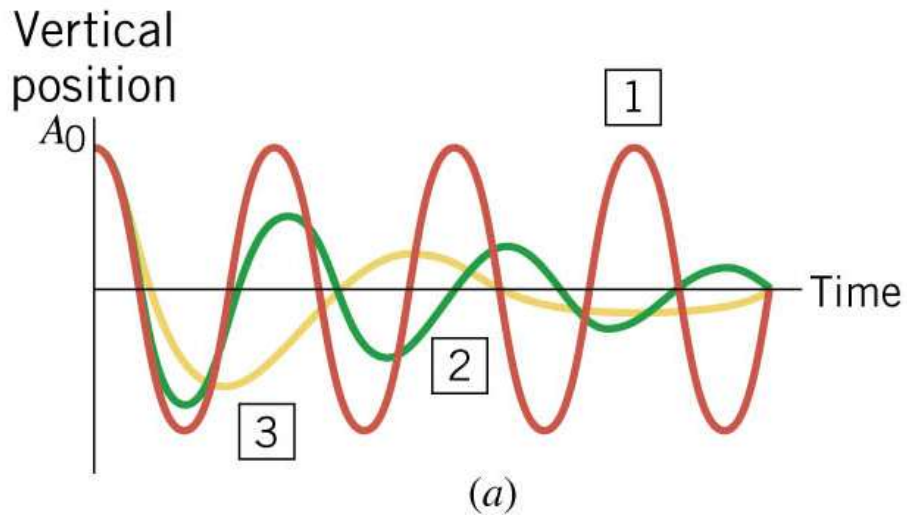
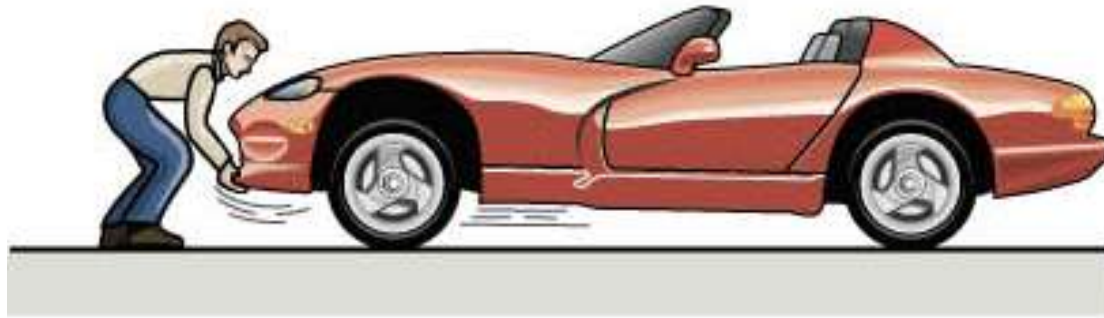
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$$\omega = \sqrt{\frac{K}{I}}, \quad K \text{ wire stiffness}$$

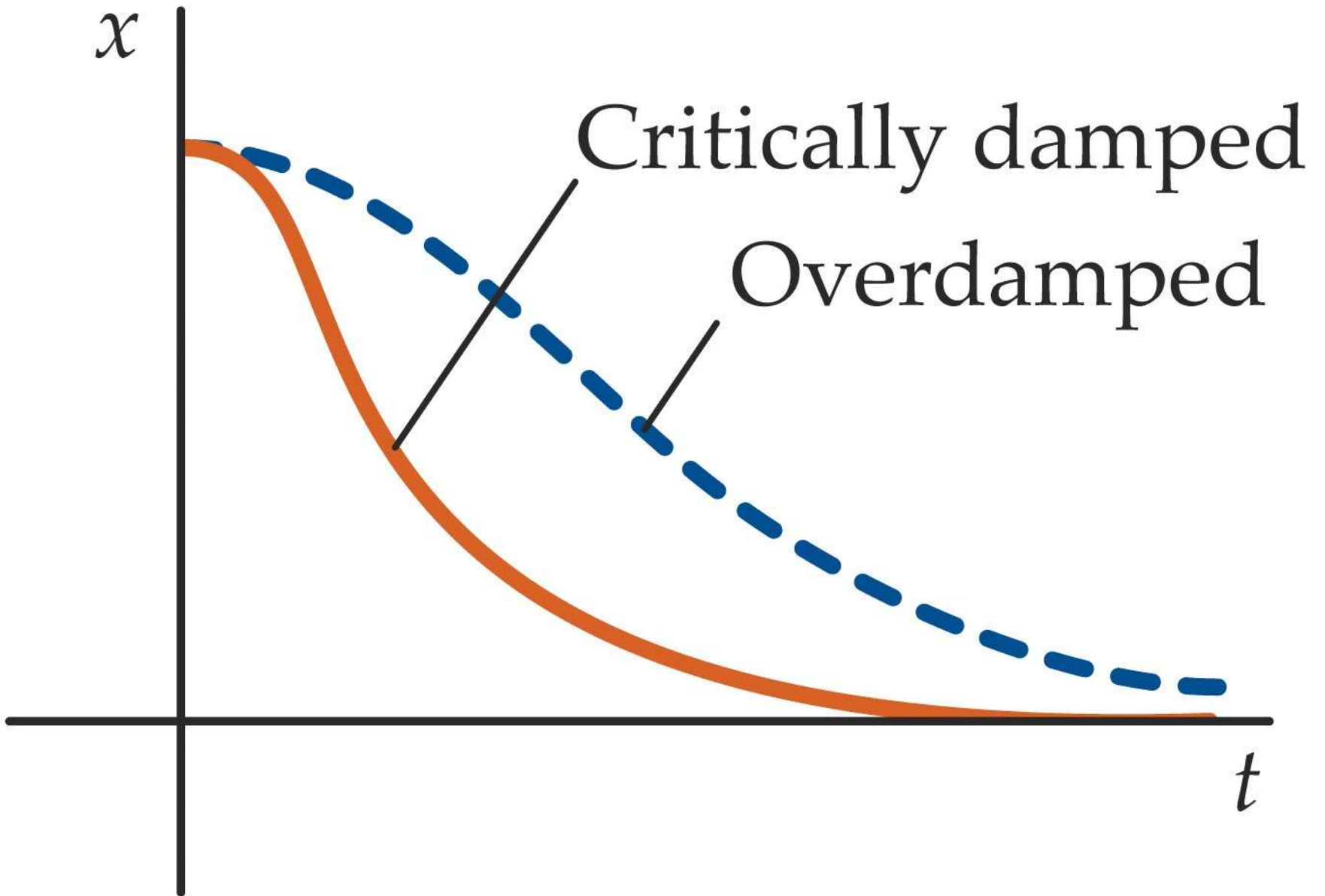


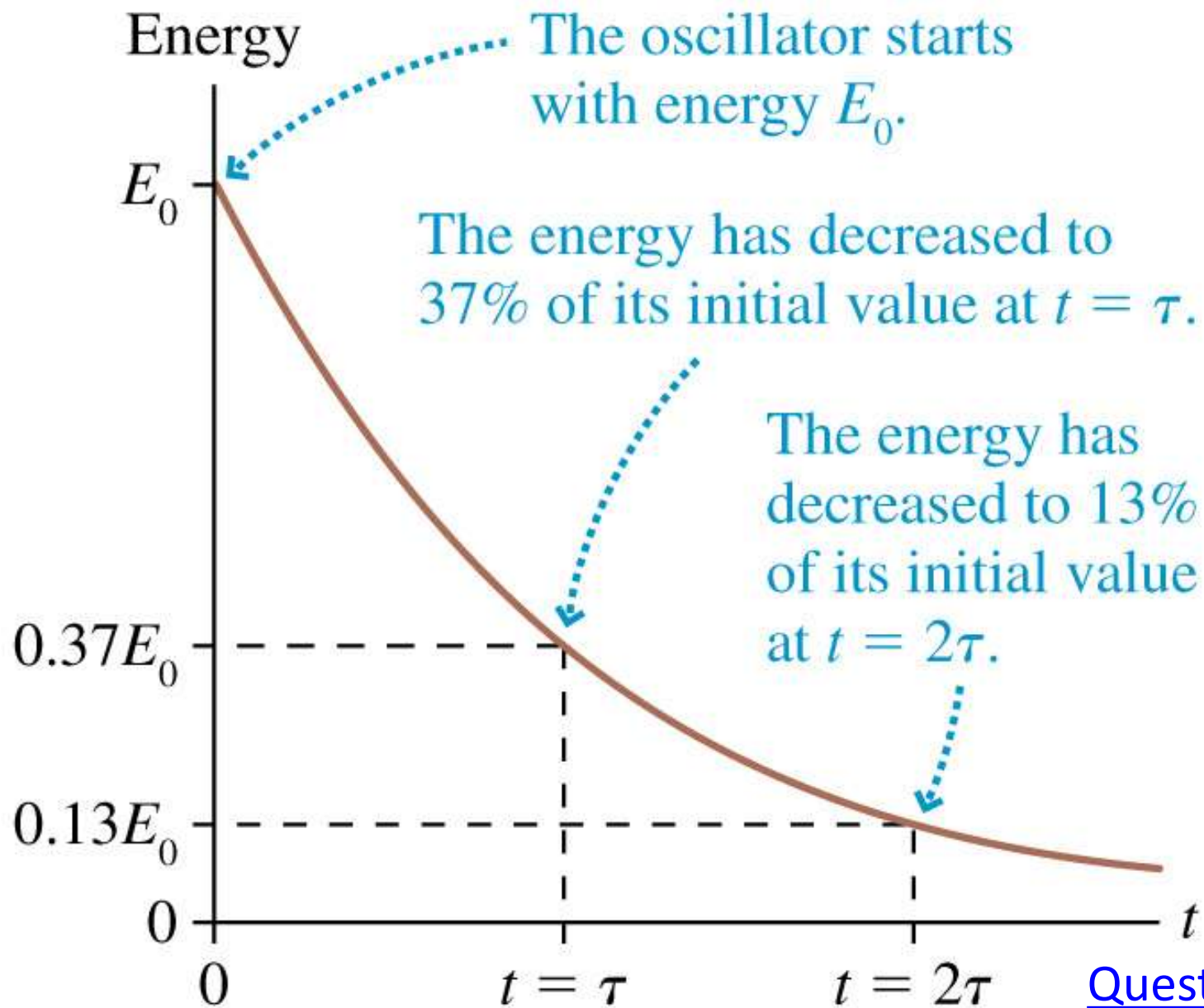






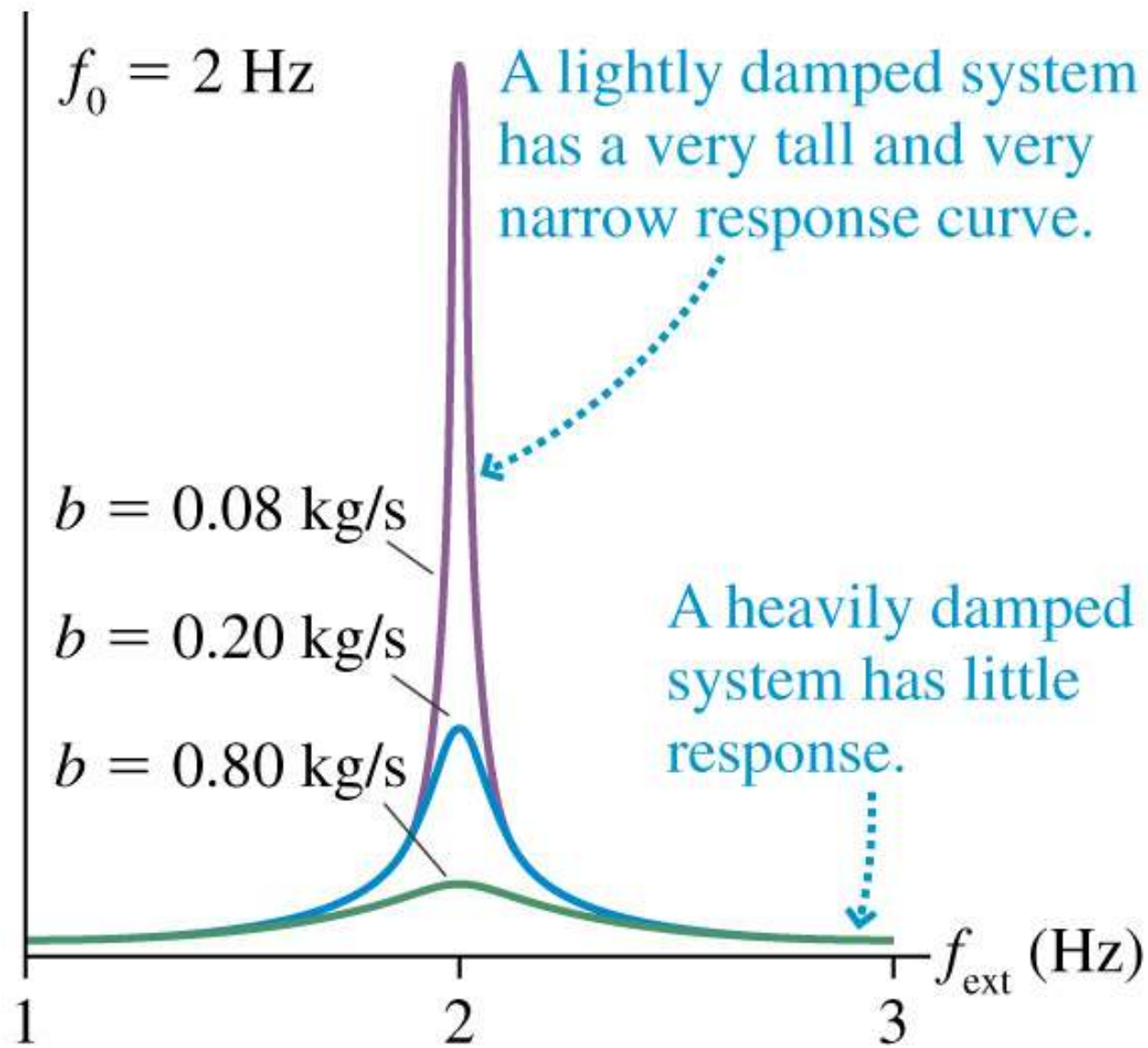
[Questions](#)

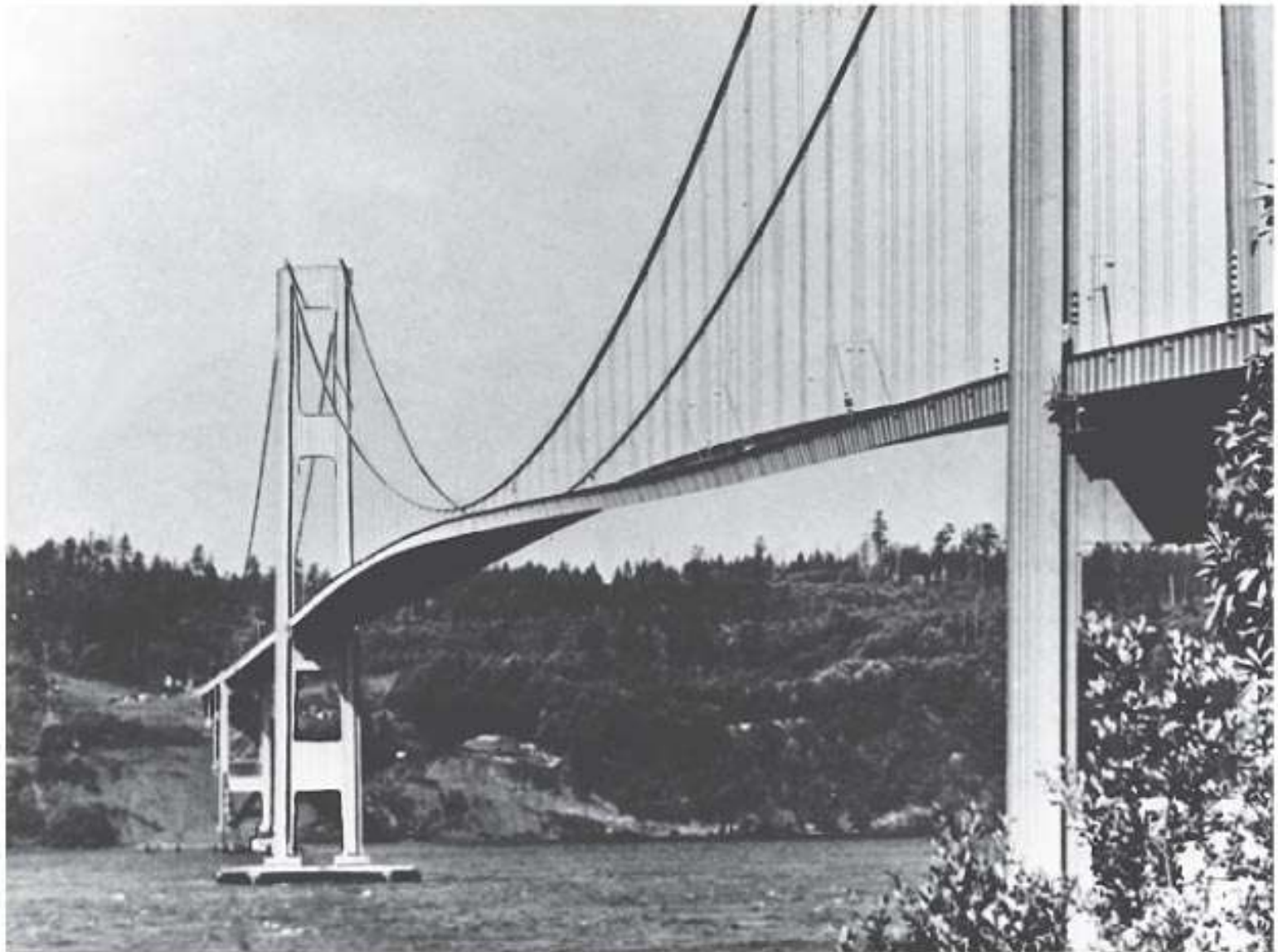




[Questions](#)

Amplitude





(a)

[YouTube Video](#)