PHYSICS

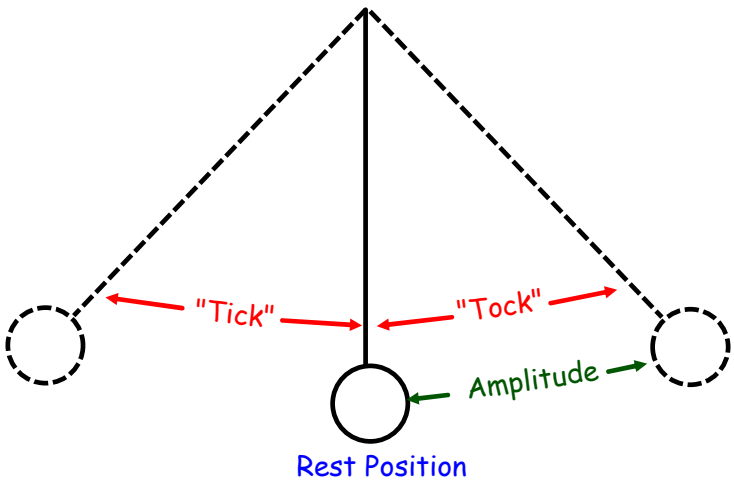
WAVES AND VIBRATIONS

WAVES AND VIBRATIONS

WAVE -

VIBRATION -

PERIODIC MOTION -



REST POSITION -

AMPLITUDE (***A***) -

CYCLE -

-

PERIOD (***T***)-

FREQUENCY (***f***) -

-

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Formulas ...

$$f = \frac{C}{t}$$

f - Frequency (Hz)
C - Number of cycles
t - Time (s)

$$T = \frac{t}{C}$$

T - Period (s)
C - Number of cycles
t - Time (s)

$$T = \frac{1}{f}$$

$$f = \frac{1}{T}$$

Ex: Calculate the frequency and period of the following videos by counting the number of cycles there are in 30 s.

http://www.youtube.com/watch?v=7Ktkgeib6l8

http://www.youtube.com/watch?v=hOYa7muvk0g&NR=1

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Ex: While listening to some soothing ocean waves, you observe that 12 waves crash upon the shore in 30 seconds.

a) Calculate the frequency of the waves.

b) Calculate the period of the waves.