

Wave Review:

Period: $T = \frac{\text{time}}{\text{cycles}}$ (time for 1 cycle) (s)

Frequency: $f = \frac{\text{cycles}}{\text{time}}$ (cycles in 1 time unit)
(s^{-1} or /s or Hz)

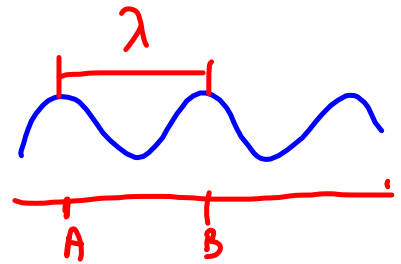
Note that period and frequency are reciprocals of one another.

use x^{-1}
button

$$T = \frac{1}{f} \quad \text{or} \quad f = \frac{1}{T}$$

Universal Wave Equation:

$$v = \lambda f$$



where v is the wave speed (m/s)

λ is the wavelength (m)

f is the frequency (Hz)

Also you
can use:

$$v = \frac{\Delta d}{\Delta t}$$

MP/340

24 times

36 s

$$f = \frac{\text{cycles}}{\text{time}}$$

$$T = \frac{\text{time}}{\text{cycle}}$$

$$f = \frac{24}{36\text{s}}$$

$$T = \frac{36\text{s}}{24}$$

$$f = 0.67\text{s}^{-1}$$

$$0.67\text{ Hz}$$

$$T = 1.5\text{s}$$

$$f = \frac{2}{3\text{s}} \xrightarrow{\text{reciprocal}} T = \frac{3\text{s}}{2}$$

MP/348

$$f = 2.8\text{ Hz}$$

$$\lambda = 0.36\text{ m}$$

$$v = ?$$

$$v = \lambda f$$

$$v = (0.36\text{ m})(2.8\text{ s}^{-1})$$

$$v = 1.0\text{ m/s}$$

To Do: PP/341

PP/349-350

Assignment: p373/21-28

(due Wed, Jan 8)