## Answer on Question 58874, Physics, Other

## Question:

What is the period of a wave that has a wavelength of 35.5 m and a speed of $620 \mathrm{~ms}^{-1}$.

## Solution:

Let's first find the frequency of the wave from the wave-speed formula:

$$
v=f \lambda,
$$

here, $v$ is the speed of the wave, $f$ is the frequency and $\lambda$ is the wavelength.
Then, from this formula we get:

$$
f=\frac{v}{\lambda}=\frac{620 \mathrm{~ms}^{-1}}{35.5 \mathrm{~m}}=17.46 \mathrm{~Hz} .
$$

Finally, we can find the period of the wave. By the definition of the period we have:

$$
T=\frac{1}{f}=\frac{1}{17.46 \mathrm{~Hz}}=0.057 \mathrm{~s} .
$$

## Answer: <br> $T=0.057 \mathrm{~s}$.

