# WAVE VELOCITY CALCULATIONS

Name _____

**Velocity = Wavelength x Frequency**

Solve the following problems.

1. A tuning fork has a frequency of 280 hertz, and the wavelength of the sound produced is 1.5 meters. Calculate the velocity of the wave.

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2. A wave is moving toward shore with a velocity of 5.0 m/s. If its frequency is 2.5 hertz, what is its wavelength?

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3. The speed of light is $3.0 \times 10^{8}$ m/s. Red light has a wavelength of $7 \times 10^{-7}$ m. What is its frequency?

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4. The frequency of violet light is $7.5 \times 10^{14}$ hertz. What is its wavelength?

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5. A jump rope is shaken producing a wave with a wavelength of 0.5 m with the crest of the wave passing a certain point 4 times per second. What is the velocity of the wave?

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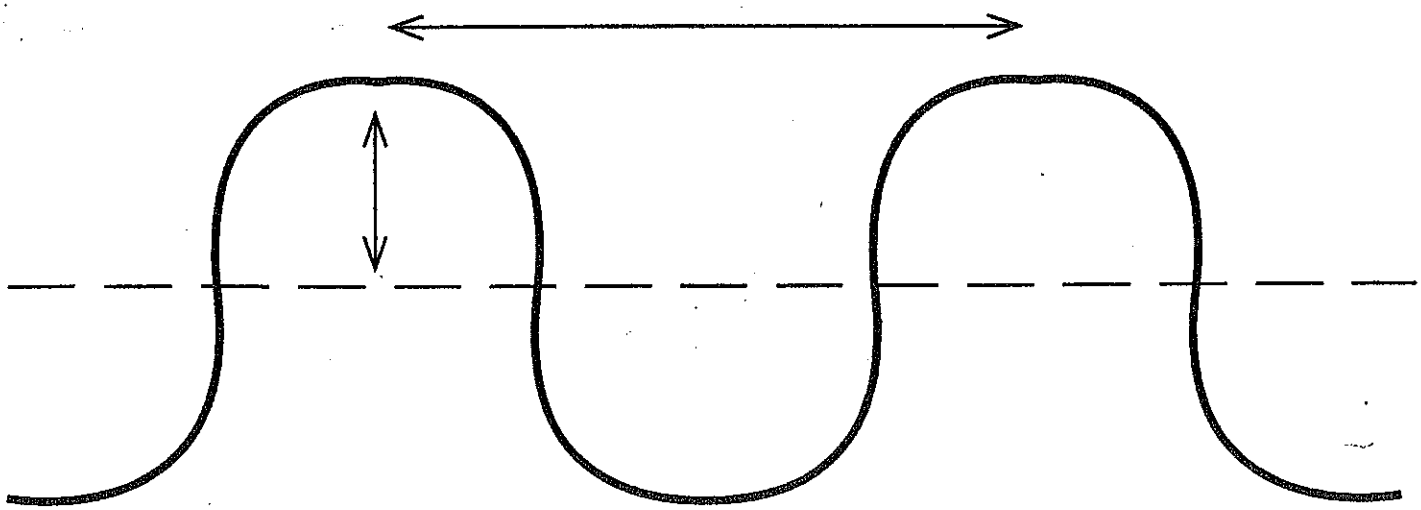
# WAVE DIAGRAM

Name _____

On the following diagram, place the following terms in their correct places: amplitude, wavelength, crest, trough, rest position.



Define the terms below.

amplitude _____

_____

wavelength _____

_____

crest _____

_____

trough _____

_____