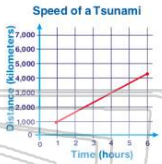
The energy of waves

Sci H

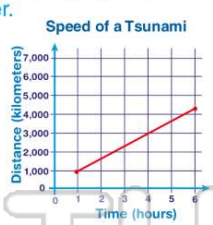
Name _____ Class _____ Date _____

1 The graph below plots the **speed** of a tsunami and the distance it traveled. One hour after the tsunami started, the wave had traveled about _____.



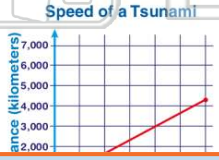
A 1,000 km
B 2,000 km
C 3,000 km
D 4,000 km

2 A seismologist knows the following information: hour 1 was at **5:00 a.m.** in India, and India is **3,000 km** from the epicenter. At approximately **what time** might India be struck by the oncoming tsunami?



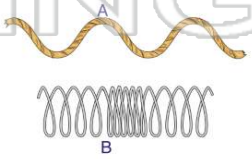
A 4:00 a.m. **C** 8:00 a.m.
B 5:00 a.m. **D** 1:00 p.m.

3 Based on the graph below, the **speed** at which the tsunami traveled _____.



A kept increasing
B continued to decrease
C stayed the same
D speeded up and

4 In this diagram, **A represents** a _____.



A longitudinal wave; B represents a transverse wave
B transverse wave; B represents a longitudinal wave
C rarefaction wave;

PREVIEW

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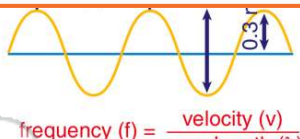
5

7

A air
B rope
C students
D moisture

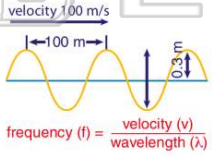
C 100 m
D 130 m



frequency (f) = velocity (v) / wavelength (λ)

9 The amplitude of this wave is 0.6 m. The **amplitude** of a wave is the distance _____.

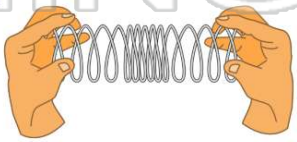
A from the crest of one wave to the crest of the next wave
B from the trough of one wave to the trough of the next wave
C between wavelengths
D from the crest to the trough within a wave



frequency (f) = velocity (v) / wavelength (λ)

10 In the picture below, determine which **direction** the wave is moving.

A up and down
B to the left
C to the right
D cannot be determined



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ANSWER KEY

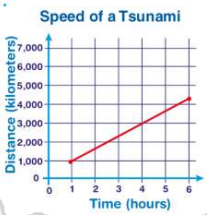
The graph below plots the **speed** of a tsunami and the distance it traveled. One hour after the tsunami started, the wave had traveled about _____.

A 1,000 km
B 2,000 km
C 3,000 km
D 4,000 km

a

A seismologist knows the following information: hour 1 was at **5:00 a.m.** in India, and India is **3,000 km** from the epicenter. At approximately **what time** might India be struck by the oncoming tsunami?

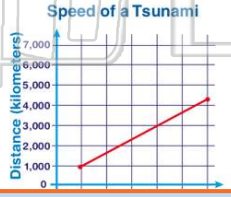
A 4:00 a.m. **C** 8:00 a.m.
B 5:00 a.m. **D** 1:00 p.m.



c

Based on the graph below, the **speed** at which the tsunami traveled _____.

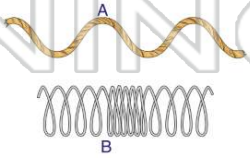
A kept increasing
B continued to decrease
C stayed the same
D speeded up and then slowed down



c

In this diagram, **A represents** a _____.

A longitudinal wave; B represents a transverse wave
B transverse wave; B represents a longitudinal wave
C rarefaction wave; B represents a compression wave
D compression wave; B represents



b

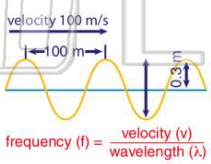
B rope
C students
D moisture

D 130 m

frequency (f) = velocity (v) / wavelength (λ)

The amplitude of this wave is 0.6 m. The **amplitude** of a wave is the distance _____.

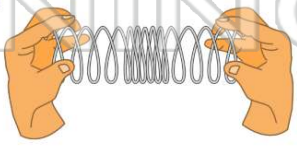
A from the crest of one wave to the crest of the next wave
B from the trough of one wave to the trough of the next wave
C between wavelengths
D from the crest to the trough within a wave



d

In the picture below, determine which **direction** the wave is moving.

A up and down
B to the left
C to the right
D cannot be determined



d