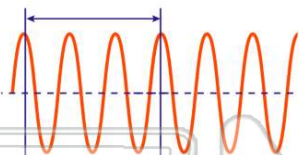




Name _____ Class _____ Date _____

1 A motor is used to produce 4.0 waves each second in a string. What is the frequency of the waves?

- A 0.25 Hz
- B 15 Hz
- C 25 Hz
- D 4.0 Hz



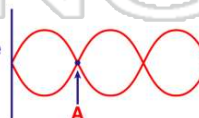
3 A surfacing whale in an aquarium produces water wave crests having an amplitude of 1.2 meters every 0.40 second. If the water wave travels at 4.5 meters per second, the wavelength of the wave is

- A 1.8 m
- B 2.4 m



4 The diagram below shows a standing wave. Point A on the standing wave is

- A a node resulting from constructive interference
- B a node resulting from destructive interference
- C an antinode resulting



5

PREVIEW

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7 B refracting at a boundary with a new medium
C diffracting around a barrier
D reflecting from a barrier

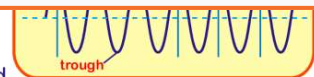
9 A source of waves and an observer are moving relative to each other. The observer will detect a steadily increasing frequency if

- A he moves toward the source at a constant speed
- B the source moves away from him at a constant speed
- C he accelerates toward the source
- D the source accelerates away from him



10 If the amplitude of a wave traveling in a rope is doubled, the speed of the wave in the rope will

- A decrease
- B increase
- C remain the same

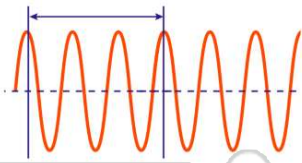




ANSWER KEY

A motor is used to produce **4.0 waves each second** in a string. What is the **frequency** of the waves?

- A 0.25 Hz
- B 15 Hz
- C 25 Hz
- D 4.0 Hz

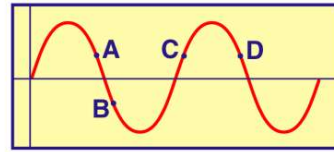


(d)

The diagram below shows a **periodic wave**.

Which points are **in phase** with each other?

- A A and C
- B A and D
- C B and C
- D C and D



(b)

A surfacing whale in an aquarium produces water wave crests having an **amplitude of 1.2 meters every 0.40 second**. If the water wave travels at **4.5 meters per second**, the **wavelength** of the wave is

- A 1.8 m
- B 2.4 m
- C 3.0 m
- D

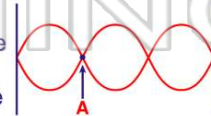


(a)

The diagram below shows a **standing wave**.

Point A on the standing wave is

- A a node resulting from constructive interference
- B a node resulting from destructive interference
- C an antinode resulting from constructive interference
- D an antinode resulting from destructive interference



(b)



PREVIEW

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medium

- C diffracting around a barrier
- D reflecting from a barrier

D quadrupled

trough

A **source** of waves and an **observer** are moving relative to each other. The **observer will detect a steadily increasing frequency if**

- A he moves toward the source at a constant speed
- B the source moves away from him at a constant speed
- C he accelerates toward the source
- D the source accelerates away from him



(c)

If the **amplitude** of a wave traveling in a rope is **doubled**, the **speed** of the wave in the rope will

- A decrease
- B increase
- C remain the same



(c)