Name _____

Unraveling the Wave Equation: A Journey into Wave Physics

Multiple Choice Questions

1. What is the wave equation used for?

A) Calculating the speed of light

B) Describing how waves move through space and time

C) Predicting earthquakes

D) Measuring temperature changes

2. What is wave speed?

A) The number of complete cycles a wave makes in one second

B) The distance between two identical points on a wave

C) How fast a wave travels through a medium

D) The speed of light in a vacuum

3. Which of the following is NOT a part of the wave equation?

A) Wave speed (v)

B) Frequency (f)

C) Amplitude (A)

D) Wavelength (λ)

4. In the wave equation $v = f \times \lambda$, if the frequency (f) of a wave decreases, what happens to the wave speed (v)?

A) It remains the same

B) It increases

C) It decreases

D) It becomes zero

5. What does wavelength (λ) measure?

A) The number of cycles a wave makes in one second

B) The distance between two consecutive wave crests

C) The speed of a wave in a vacuum

D) The temperature of a medium