

Waves & Sound – Warm-Up

Name: _____

Date: _____

Two ducks are floating in the water of the coast of Fuji where the air temperature is an amazing 28°C . An observer on shore notes that at a time when one duck is at the top of one crest the other duck is in a trough and there are exactly two crests between them. The observer measures indirectly that the ducks are separated horizontally by 60 m and also records that the ducks bob up and down 30 times in 2 minutes.

a) Draw a diagram of this situation and calculate the wavelength.

b) Calculate the speed of the waves.

c) The observer is 1.2 km from the ducks. If one of the ducks quaked (loudly) how long would it take for the observer to hear it?

Review for Quiz:

- Types of Waves & What are Waves
- Types of Mechanical Waves
- Reflection and Transmission of Waves/Waves at Boundaries
- Period, Frequency and Speed of Waves
- Speed of Sound & Mach Number
- Doppler Effect
- Speed of Light