Advanced Physics

IMSA Chapter 14 Unit Test Review Name_____

Speed of Sound = 345m/s unless a temperature is given.

1. Aquaman sets off an explosion in the sea to scare off a killer squid. If the squid is a half mile away, how long will it be before it hears the explosion?

2. A particular red light has a wavelength of 710 nm. What is its frequency?

3. You are standing midway between two speakers space 10.0m apart emitting a frequency of 69 Hz. The sound is very loud. Which way and how far should you move to get the sound to a minimum and still be standing between the speakers?

4. What is the intensity of an 80.0-decibel truck horn in watts per square meter?

5. You are out driving on a wonderful 25.0^0C day. You are traveling 45.0 miles per hour when another driver cuts you off moving at 112 miles per hour. You blow your 50.0 dB horn that has a frequency of 350.0 Hz. What is the frequency the rude driver hears?

6. What is the second fundamental of hanging a 1.2-m wire that has a mass of .55 g with a 2.0-kg mass attached to the bottom?

7. A trumpet has a tube length of .75 m. What is the horn's fundamental frequency if the air temperature is zero degrees Celsius?

8. In a closed tube a 585 Hz tuning fork resonates at .150 m. What is the temperature of the room in degrees C?