MYP 4 Physics

Unit 2 : Get on the Wave

Homework

1. A stone is dropped from the top of a tower 500 m high into a pond of water at the base of the tower. When is the splash heard at the top? Speed of sound is $340ms^{-1}$. (Hint: use kinematic equations to calculate time. Take acceleration due to gravity as $10m/s^2$)
2. A stone is dropped from the top of a well of depth 490m. When is splash of sound heard at top? The speed of sound in air is $340ms^{-1}$. . (Hint: use kinematic equations to calculate time. Take acceleration due to gravity as $10m/s^2$)
3. What should be the minimum distance between a sound source and reflector to hear a distinct echo?
4. 25 waves pass through a point in 5 seconds. If the distance between one compression and its adjacent rarefaction is 0.05m. Calculate: a) the frequency b) the wave length c) wave length.
5. 20 waves pass through a point in 2 seconds. If the distance between one compression and its adjacent rarefaction is 1.5m. Calculate: a) the frequency b) the wave length c) wave length.
6. Explain why the ceilings of concert halls and conference halls made curved?

7. A sound wave has a frequency of 1500Hz and wavelength 25cm. How long will it take to travel 3 km?