




WAVE REVIEW QUESTIONS

1. A node is a result of this type of interference:
2. A 3D picture made from coherent light:
3. The effect whereby a moving object produces a change in pitch:
4. Defined as the number of waves vibrating per second:
5. The type of wave that can travel in a vacuum:
6. The mathematical relationship between frequency and period:
7. The musical term for frequency:
8. A measure of the maximum height of a wave:
9. The units of measure in the metric system for frequency:
10. The length of time for one wave to pass:
11. The type of wave that describes sound:
12. The length of a wave measured in meters:
13. Musical term for the doubling of frequency:
14. The interference of 2 waves close in frequency:
15. A logarithmic scale for measuring sound intensity:
16. The longest wave that can fit into an instrument:
17. The length of the wave that produced resonance in SOS lab:
18. Ratio of speed of aircraft to SOS in air:
19. The amplification of a standing wave:
20. The type of wave that travel around the world:
21. A type of wave that is dangerous to your health:
22. The length of the 2nd harmonic that forms in string instrument:
23. As tension in a string increases, frequency will ...
24. As frequency in a wind instrument increases, wavelength will ...
25. Give one example each of good and bad resonance:
26. List 4 of each of the following: Ways to polarize light

Destructive
hologram
Doppler Effect
~~wave speed~~ frequency
Electromagnetic
Inverse
pitch
Amplitude
Hertz (Cyc/sec)
Period
longitudinal

Octave
Beats
Decibel
fundamental (1st harmonic)
Quarter $L = \frac{1}{4} n \lambda = \frac{1}{4} \lambda$
Mach #
Resonance
~~radio~~ AM Radio
More than UV, x ray, gamma
~~one 1~~ one 1
↑
↓

$$v = f \lambda$$

4 ways Polarize Light

- Selective absorption
- Scattering: (Blue Skies)
- Reflection: glare
- Double Refraction (Birefringence)

How laser light is different from ordinary light

Uses of lasers, doppler, polarization

Laser light different

- Bright/intense
- Narrow/Directional
- Monochromatic (single color/1)
- Coherent (waves in phase)

Laser Uses

- Medicine/Dentistry Surgery/Diagnostics
- Info processing: CDs, DVD's, checkout scanner, computer memory
- Military - rangefinder target designation, weapons
- Holograms

Polarization

- Sunglasses
- LCD's
- Stress Analysis
- Animation
- Animal Navigation
- manufacturing

Doppler Uses

- Medical ultrasound
- Astronomy - detect expanding universe
- SONAR
- Bats
- RADAR: