

# Lesson 4A ver 2

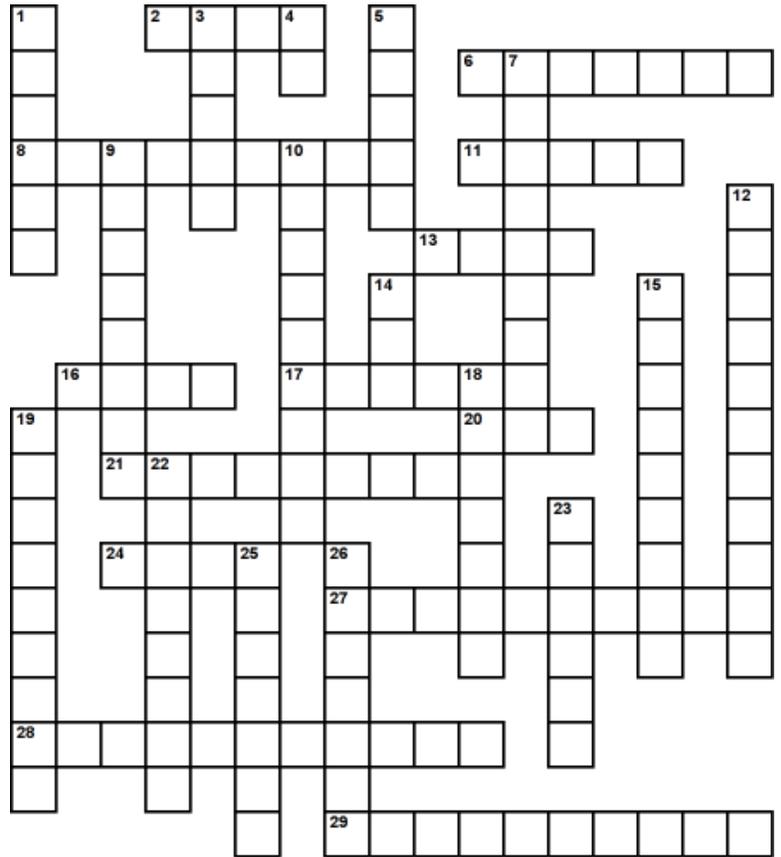
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## Across

2. \_\_\_ \_ SWR means an impedance mismatch (1,2,1)
6. What band is best suited to communicating via meteor scatter (1,6)
8. \_\_\_ - \_\_\_ signals are partially refracted around solid objects exhibiting sharp edges (5-4)
11. The coax connector commonly used at HF frequencies (2-3)
13. \_\_\_ of an antenna is the increase in signal strength in a specified direction when compared to a reference antenna
16. \_\_\_ \_ is the SWR meter reading for a perfect impedance match between the antenna and the feedline (1,2,1)
17. Air-insulated hard line has the \_\_\_ loss at VHF and UHF
20. \_\_\_ signals rarely heard from stations outside your local coverage area because they are usually not reflected by the ionosphere
21. A VHF or UHF mobile antenna mounted in the center of the vehicle roof provides the most uniform \_\_\_ pattern?
24. An electrical difference between the smaller RG-58 and larger RG-8 coaxial cable is RG-8 cable has \_\_\_ loss at a given frequency
27. The \_\_\_ enables the propagation of radio signals around the world
28. The quad, Yagi, and dish are \_\_\_ antennas
29. \_\_\_ are likely to increase if VHF or UHF data signals propagate over multiple paths (5,5)

## Down

1. Signals from a "rubber duck" antenna inside your car be \_\_\_ than when it is outside
3. An antenna \_\_\_ matches the antenna system impedance to the transceiver's output impedance
4. The approximate length, in inches, of a quarter-wavelength vertical antenna for 146 MHz
5. A 5/8 wavelength antenna for VHF or UHF mobile service offers a \_\_\_ angle of radiation and more gain than a 1/4 wavelength antenna
7. Signal reflections may cause \_\_\_ - \_\_\_ distortion (5-4)
9. An \_\_\_ in the radiating portion of the antenna to make it electrically longer is a type of antenna loading
10. A \_\_\_ consists of a non-inductive resistor and a heat sink (5,4)
12. \_\_\_ light can damage the jacket and allow water to enter coaxial cable
14. It important to have a \_\_\_ SWR in an antenna system to allow efficient power transfer and reduce losses
15. A directional \_\_\_ could replace a SWR meter to measure feedline and antenna matching
18. Six or ten meters may provide long distance communications during the peak of the \_\_\_ cycle
19. The strongest radiation from a half-wave dipole is \_\_\_ to the antenna



22. If your stations' 2 meter signals were strong, but now they are weak, try moving \_\_\_ \_ (1,3,4)
23. A \_\_\_ antenna with the conductor parallel to the Earth's surface is horizontally polarized
25. Tropospheric \_\_\_ is responsible for over-the-horizon VHF and UHF communications to ranges of 300 miles on a regular basis
26. \_\_\_ coaxial cable requires special techniques to prevent water absorption when compared to foam or solid dielectric types (3,4)