

GPS Questions for National FFA Contest

White Track

- 1) "Two blocks south of Lucas Oil Stadium" is a phrase relevant to which of the following positioning systems?
 - a) Celestial
 - b) LORAN
 - c) Landmark
 - d) OMEGA

- 2) Which of the following positioning systems is best utilized in precision agriculture regarding application of an herbicide on a crop as part of an agriculture producer's integrated pest management plan?
 - a) SatNav
 - b) OMEGA
 - c) LORAN
 - d) Landmark

- 3) Satellites within the U.S. Global Positioning System have an orbital period of approximately _____?
 - a) 8 hours
 - b) 10 hours
 - c) 12 hours
 - d) 24 hours

- 4) Which of the following coordinates are in the latitude/longitude decimal-degrees format?
 - a) $32^{\circ} 00' 0.00''$ $098^{\circ} 00' 0.00''$
 - b) 32.00000° 098.00000°
 - c) $32^{\circ} 00'.00$ $098^{\circ} 00'.00$
 - d) 057:18.25 35:58.325

- 5) Part of the gps trilateration process involves computation of the satellite signal's _____ of travel in order to determine the gps receiver's location.
 - a) time
 - b) ephemeris
 - c) direction
 - d) linear paradox

- 6) True or False: GPS is utilized for mapping and navigation applications but also for applications requiring precise time measurements such as electrical power systems?
- a) True
 - b) False
- 7) A GPS signal typically _____ in speed as it passes through the ionosphere.
- a) Increases
 - b) Decreases
 - c) Has no change
- 8) _____ errors typically have the greatest impact on positional accuracy.
- a) Ephemeris
 - b) Multipath
 - c) Ionosphere
 - d) Troposphere
- 9) A map datum is _____.
- a) Linear progression of calculated algorithms used in GPS.
 - b) Paradoxical algorithm used to increase accuracy of GPS signals.
 - c) Regional data collected during the triangulation process.
 - d) A coordinate system or "model" of the earth's surface containing reference points.
- 10) Which of the following statements is true regarding GPS orbital performance?
- a) A low orbiting satellite improves orbital performance
 - b) A high orbiting satellite improves orbital performance
 - c) A satellite located in the ionosphere provides the best performance
 - d) None of the above; satellite range from a gps receiver does not affect orbital performance