

## SLSI- Datums Are A'Changin' - Assignment

Complete this assignment before the workshop. Have fun.

### True or False.

Circle the correct response for each.

T	F	1. Gravity lines are all straight.
T	F	2. NAVD 88 is a pretty good representation of the geoid.
T	F	3. Only GNSS control points will be part of the 2022 NSRS- no traditional ground based measurements will be included.
T	F	4. The 1/10,000 limit in State Plane Coordinates Systems is the distance distortion between ground and grid.
T	F	5. A typical tidal cycle takes 4-5 years.
T	F	6. NGS' official software for converting and transforming coordinates and elevations is called NCAT.
T	F	7. Principio was the first point used as the origin of an American horizontal datum.
T	F	8. UTM is short for Universal Terrain Model.
T	F	9. One way to minimize 3D to 2D distortion is to reduce the size of the area projected.
T	F	10. Vertical lines are perpendicular to the ellipsoid.

### Short Answer

**SA (1)** When did the National Geodetic Vertical Datum of 1929 (NGVD29) get its name?

**SA (2)** What forces shape the geoid?

**SA (3)** What projection surfaces are used to build grid coordinate systems?

**SA (4)** What is the shortest distance between two points on an ellipsoid called?

**SA (5)** What's the significance of Meade's Ranch?

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**SA (6)** What is the deflection of the vertical?

**SA (7)** What are the three geologic plate regions of NAD 83 (2011)?

**SA (8)** What are the two distortions are introduced projecting the 3D Earth into a 2D plane?

**SA (9)** Does Iowa have statute or code which enables use of formal coordinate systems on survey maps? If so, identify the law/code and which are allowable coordinate systems.

**SA (10)** What's the difference between a transformation and a conversion?