

Exercise Two for GSDM Seminar

Name: _____

Date: _____

Geodetic/Geocentric Coordinate Transformations – see www.globalcogo.com/BK1andBK2.xlsx

- I. Use the Geodetic Reference System of 1980 (GRS80) and BK1 to compute the Geocentric X/Y/Z coordinates for the following data:

Station: Bromilow - NAD92
Geodetic latitude = $32^{\circ} 16' 52.33407''$ N
Geodetic longitude = $106^{\circ} 45' 15.77273''$
Ellipsoid height = 1,165.523 m

- II. Use the GRS80 ellipsoid and BK2 to compute the latitude/longitude/ellipsoid height for the following data:

Station: Crucesair – NAD92
X = -1,571,430.672 m
Y = -5,164,782.312 m
Z = 3,387,603.188 m

“Standard” mathematics uses east longitude in geodetic computations. Both of the following are true.

- a. West longitude = 360° - East longitude
- b. East longitude = 360° - West longitude