


Review Test Submission: LAB\_02\_Submittal & Questions

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Course	19 FALL GEOG 352 500-501,503: GNSS IN THE GEOSCIENCES
Test	LAB_02_Submittal & Questions
Started	9/20/19 3:34 PM
Submitted	9/20/19 4:00 PM
Due Date	9/20/19 11:59 PM
Status	Completed
Attempt Score	32.5 out of 50 points
Time Elapsed	26 minutes
Results Displayed	Submitted Answers, Feedback, Incorrectly Answered Questions

Question 1

10 out of 10 points



(10pts) Purpose: Analyze the difference between NAD27 and NAD83 when supply a Lat and Lon with the wrong datum

Enter lat-lon in decimal degrees

Lat: 36.0426472000

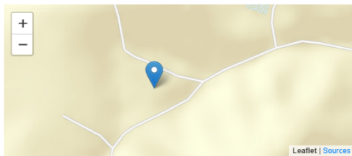
Lon: -100.6006688940

or degrees-minutes-seconds

Lat: N 36-02-33.52992

Lon: W 100-36-02.40082

or drag map marker to a location of interest



Ellipsoid Height (m)

Input datum: NAD27

Output datum: NAD27

Don't see a datum in the list? Click here to learn more.

Converted coordinates will be in output datum.

Convert

Figure 1.0 Example of NCAT

Step	Action
	<a href="https://www.ngs.noaa.gov/NCAT/">https://www.ngs.noaa.gov/NCAT/</a>
1	1. USE: <b>Lat: 36.04264720 Lon: -100.60068894</b> 2. Set Input Datum: NAD27 (Correct) 3. Set Output Datum: NAD27 4. Convert 5. Complete Table with NAD27 <sub>27</sub> Northing and Easting
2	6. USE: Correct <b>Lat: 36.04264720 Lon: -100.60068894</b> 7. Set Input Datum: NAD83(2011) Incorrect 8. Set Output Datum: NAD27 9. Convert 10. Complete Table with NAD27 <sub>83</sub> Northing and Easting
3	Add to the table (usft)
4	Use ePortfolio to compute Dist, AZ, & BRG

NOTE: Coordinates in 2 decimals significant-figure and NO COMMMMA. 4 decimals significant-figure for Degrees

NAD 27(Input:NAD27) (usft)	NAD 27 (Input:NAD83(2011)) (usft)
Format: (#####.##)	Format: (#####.##)
N1: [1]	N2: [3]
E1: [2]	E2: [4]

Distance = Sqrt ((N2- N1)<sup>2</sup> + (E2 – E1)<sup>2</sup>) (###.##) [5] usft

Azimuth (D.dddd) = [6]

**Bearing** (ie. N 00 00 00 E) = [7]

Inverse Point Computer

Enter N1:

Enter E1:

Enter N2:

Enter E2:

DIST =

AZ in DD =

AZ in DMS =  Deg  Min  Sec

BEARING =   Deg  Min  Sec

Figure 2.o ePortfolio Example

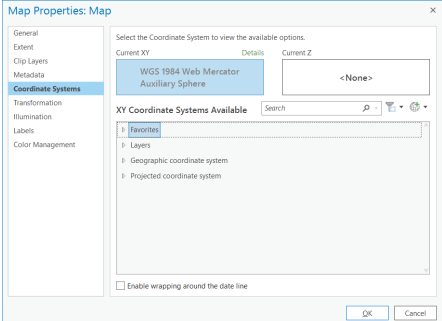
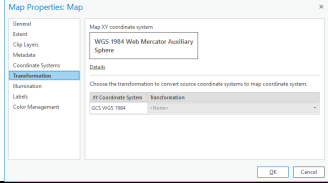
Specified Answer for: 1 744660.14  
Specified Answer for: 3 744647.47  
Specified Answer for: 2 2265878.46  
Specified Answer for: 4 2266003.18  
Specified Answer for: 5 125.36  
Specified Answer for: 6 95.7989  
Specified Answer for: 7 S 84 12 03 E  
Response Feedback: Congrats!!

Question 2

0 out of 5 points



**(10pts) Purpose:** Set coordinate System and Add Spatial Data with different Coordinate

Step	Action
1	<b>Open</b> ArcGIS Pro; Make Map GEOG352Lab2.DB
2	<b>Right Click</b> on Map Properties; Coordinate Systems <div><ul style="list-style-type: none"><li>Geographic Coordinate Systems</li><li>Projected Coordinate Systems</li></ul><p><b>Optional:</b> <b>Right Click</b> Add all Texas to Favorites</p></div> 
3	<b>Select</b> Projected Coordinate System; NAD 1927 Texas Central FIPS4203 <b>Properties</b> View Transformations that an be used. (See full list from \LAB02\geographic_transformation.pdf) 
4	<b>Add TNIRIS Datasets</b> <div><ol style="list-style-type: none"><li>Goto <a href="https://data.tnris.org/">https://data.tnris.org/</a></li><li>Select Data Hub</li><li>Select Land Parcels</li><li>Select Downloads</li><li>Select Brazos County</li></ol></div>

	<b>6. Extract Zip File</b> 7. ArcGIS Pro Select Add Data find \SHP\stratmap19-landparcels_48041_brazos_201904.shp <b>8. Rename to Brazos_Parcels_201904</b>
5	<b>Add TGLO Datasets</b> 1. <b>Goto</b> Shared directory\LAB02\DATA\01_OTLS_Brazos 2. <b>Download/Extract \LAB02\DATA\01_OTLS_Brazos.ZIP</b> 3. ArcGIS Pro Select Add Data find \survo41s.shp 4. <b>Rename:</b> Brazos_OTLS
6	<b>Symbology</b> 1. <b>ArcGIS Pro</b> 2. <b>Click on Brazos_Parcels_201904 symbol and select Black Outline</b> 3. <b>Click on Brazos_OTLS</b> <ol style="list-style-type: none"> <li><b>Select Properties</b></li> <li><b>Set Appearance</b> <ol style="list-style-type: none"> <li><b>Color = No Color</b></li> <li><b>Outline Color = ORANGE</b></li> <li><b>Outline Width = 2pt</b></li> <li><b>Apply</b></li> </ol> </li> </ol>
	<b>Exceeds Mastery!:: Turn on labels</b> 1. Add Owner_Name Brazos_Parcels_201904 2. Add L1SURNAM Brazos_OTLS
7	<b>Answer Questions:</b> What Transformation is used for 1. Brazos_Parcels_201904 [1]? 2. Brazos_OTLS [2]?

Specified Answer for: 1 WGS 1984 Web Mercator Auxiliary Sphere

Specified Answer for: 2 WGS 1984 Web Mercator Auxiliary Sphere

Response Feedback: Type Exactly what the Transformation Name.

**Question 3**

5 out of 5 points

**MAKE Screengrab Zoomed Brazos County Map in PDF Format**

Selected Answer: image.png

Response Feedback: [None Given]

**Question 4**

2.5 out of 10 points

**(10 pts) Purpose: Get Coordinates from Map using ArcGIS Online**(Round your *Decimal Degrees* answers to 4 decimal places. Round your Northing and Easting to 2 decimal places)

PICK THE NORTHERN MOST LOCATION OF THE FEATURE

Feature	Decimal Degrees	NAD 27	NAD 83 (1986)	
EXAMPLE: Eller O&M Building	30.6178 <sup>0</sup> , -96.3367 <sup>0</sup>	N: E:	N: E:	N: E:
Texas A&M golf course building	[1], [2]	[3], [4]	[5], [6]	[7], [8]
Lake Placid @ North center dam release	[9], [10]	[11], [12]	[13], [14]	[15], [16]
Easterwood Airport main terminal building	[17], [18]	[19], [20]	[21], [22]	[23], [24]
Jack K. Williams Administration Building	[25], [26]	[27], [28]	[29], [30]	[31], [32]

Specified Answer for: 1 30.6170

Specified Answer for: 2 -96.3341

Specified Answer for: 3 10211510.37

Specified Answer for: 4 3553388.13

Specified Answer for: 5 10210809.91

Specified Answer for: 6 3554199.97

Specified Answer for: 7 10210808.41

Specified Answer for: 8 3554198.48

Specified Answer for: 9 30.5943

Specified Answer for: 10 -96.2584

Specified Answer for: 11 360862.84

Specified Answer for: 12 3281807.70

Specified Answer for: 13 10203444.63

Specified Answer for: 14 3578287.18

Specified Answer for: 15 10203443.16

Specified Answer for: 16 3578285.70

Specified Answer for: 17 30.5938

Specified Answer for: 18 -96.3663

Specified Answer for: 19 359450.98

Specified Answer for: 20 3247877.17

Specified Answer for: 21 10202033.04

Specified Answer for: 22 3544356.44

Specified Answer for: 23 10202031.50

Specified Answer for: 24 3544354.93

Specified Answer for: 25 30.6190

Specified Answer for: 26 -96.3366

Specified Answer for: 27 368929.89

Specified Answer for: 28 3256910.29

Specified Answer for: 29 10211511.87

Specified Answer for: 30 3553389.63

Specified Answer for: 31 10211510.37

Specified Answer for: 32 3553388.13

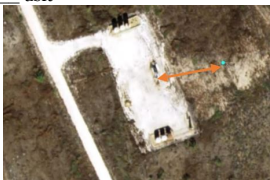
Response Feedback: Be sure your answer is in D.dddd and #####.## format. NO COMMAS.

## Question 5

5 out of 10 points



**(10pts) Purpose:** Search for a well on the Texas Railroad Commission website with an API=39332444. Query the well. Download the Survey and Drilling Permit. Complete the following:

Step	Action
1	Goto <a href="http://gis.rrc.texas.gov/GISViewer/">http://gis.rrc.texas.gov/GISViewer/</a>
2	Search API 39332444
3	<b>Investigate Well Data</b> <ol style="list-style-type: none"> <li>1. Select Identify Tool Wells</li> <li>2. Select 3933244 well</li> <li>3. View Drilling Permits</li> <li>4. View Well Logs</li> </ol>
5	Note the GIS Lat (NAD27 and NAD83)
7	Now let's try to figure out why the point for the well is not on the well pad. <ol style="list-style-type: none"> <li>1. <b>Turn on</b> Aerial Images</li> <li>2. <b>Use measure tool</b> Distance from Well location to Well on Aerial Image</li> <li>3. Distance = _____ usft</li> </ol> 
8	Compute Distance from NAD27 to NAD83 (See Task 1.) Distance = _____ usft
9	What is the difference between Measured and Computed Distance Difference?

Distance Computed:	Distance Measured
###.##	###.##
[1]	[2]

Specified Answer for: 1 0.63

Specified Answer for: 2 175.05

Response Feedback: Please check that your measured distance is between 165-180

**Question 6**

2 out of 2 points



NCAT with the NGS will provide

Selected Answer:

LLh

SPC

UTM (m)

XYZ (m)

USNG

**Question 7**

2 out of 2 points



ArcGIS Pro Starts all maps with what Projection

Selected Answer: WGS 1984 Web Mercator Auxiliary Sphere

**Question 8**

2 out of 2 points



You have been supplied a Latitude and Longitude to stake a Well in Brazos County. You must make sure that

Selected Answer: You know the Geographic System the Lat and Lon.

**Question 9**

2 out of 2 points



To project a Latitude and Longitude to Northing and Easting you use

Selected Answer: Conversion

**Question 10**

2 out of 2 points



To compute from a NAD27 Datum to Web Mercator Auxiliary Sphere you must use

Selected Answer: A Trasnformation

Wednesday, December 4, 2019 5:51:18 PM CST

← OK