ES302 Map Measurement and Location Exercise

Task1: Using the map below, fill in the data table with azimuth and distance measurements between point A, B, and C. Note the north arrow and scale of the map. Use an engineers scale and protractor to make your measurements. The UTM coordinates of the southwestern corner of the map are: Easting = 481,000 m E. Northing = 4,956,000 m N.

From	To	Azimuth (decimal degrees)	Distance (km)	UTM Coordinates	
				Easting (m)	Northing (m)
C	B	_____	_____		
B	A	_____	_____	Pt A _____	_____
A	C	_____	_____	Pt B _____	_____
C	A	_____	_____	Pt C _____	_____
B	C	_____	_____		

Task 2: Using and engineer's scale and two drawing triangles, measure, location, and draw "point D", exactly 545 m south of point A. Mark on your map and show your measurements.

A +

B
+

+

C

N

Scale: 1:12,000
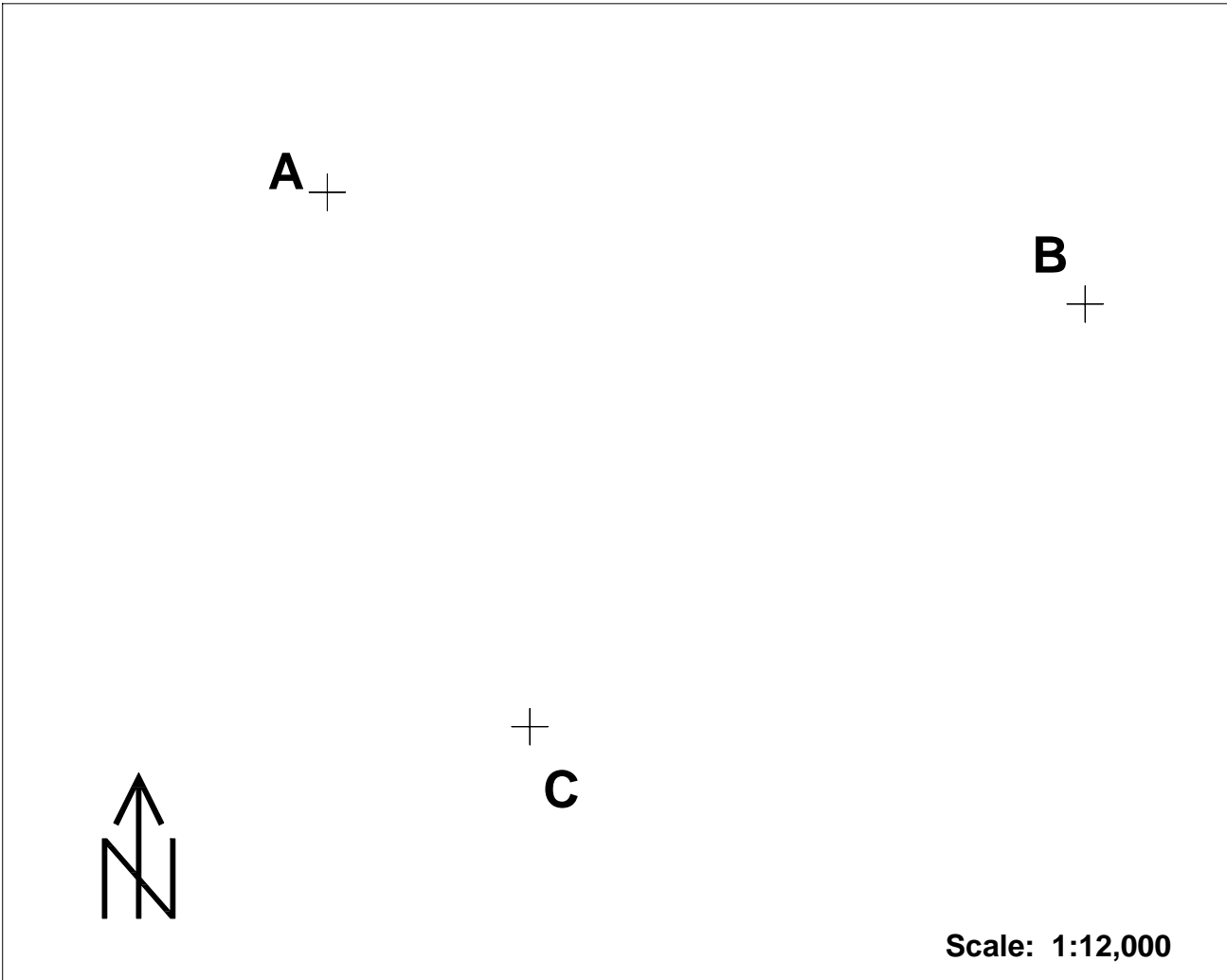
Task 3: Locate points A, B, and C on the Monmouth 7.5-minute Quadrangle map available in the room. Do the occur on the quad? or another quad? What geographic locations are they closest to?

ES341 In-Class Exercise – Conversion of Longitude and Latitude   Name_____

Convert the Following Locations in Lat-Lon to Decimal Degrees (show all your math work)
(given conversions: 1 deg = 60 min; 1 min = 60 sec; 1 deg = 3600 sec)

	Lat	Dec. Deg	Long	Dec. Deg.
Seattle	47°36'40" N	_____	122°20' 57" W	_____
Honolulu	21°18'22" N	_____	157°50'10" W	_____
New York	40°30'43" N	_____	73°58'32" W	_____

Convert the following locations in Decimal Degrees to degrees-minutes-seconds

Lat		Long		Approximate Location?
25.7532° N	_____	80.2376° W	_____	_____
53.2356° N	_____	9.0034° W	_____	_____
60.487° N	_____	5.3357° E	_____	_____