Dear students,

Please solve the following problems for Assignment #4 for your next DGD.

1. Convert the azimuths from north to bearings, and compute the angles, smaller than 180° between successive azimuths.

$98°12'55'', 153°26'40'', 192°56'22''$, and $288°12'50''$

2. Convert the bearings in problem below to azimuths from north and compute the angle, smaller than 180°, between successive bearings.

$N32°42'38''E, S54°02'02''E, S22°42'56''W$, and $N44°35'26''W$

3. Course AB of a five-sided traverse runs due north. From the given balanced interior angles to the right, compute and tabulate the bearings and azimuths from north for each side of the traverses in problem below.

$$A = 82°13'15'', B = 106°35'18'', C = 28°45'06'', D = 205°14'56'', E = 117°11'25''$$

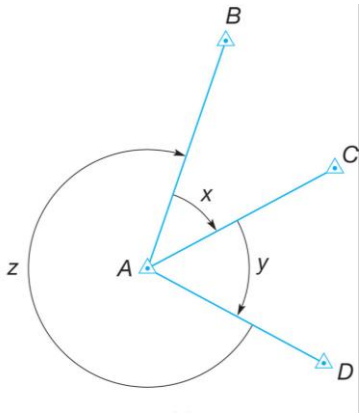
4. Compute and tabulate the azimuths of the sides of a regular hexagon (polygon with six equal angles), given the starting direction of side AB.

Azimuth of $AB = 207°53'14''$ (Station C is westerly from B.)

5. What magnetic bearing is needed to retrace a line for the conditions stated in problem below?

1875 Magnetic Bearing	1875 Declination	Present Declination
N32°45′E	8°12′W	2°30′E

6. In Figure shown, direct and reversed directions observed with a total station instrument from A to points B, C, and D are listed in problem below.



Determine the values of the three angles, and the horizon misclosure.

Direct: 0°00′00″, 106°52′06″, 191°38′43″, 359°59′58″

Reverse: 0°00′00″, 106°52′04″, 191°38′41″, 0°00′00″

Good luck,