

CVG 2171 – Surveying and Measurements
Assignment # 4 – Angles, Azimuths, and Bearings

Due Date: February 16, 2018 @ the beginning of the tutorial session

Name: _____

Student No.: _____

Notes: **Make sure to read each question carefully and show all intermediate steps.

Problem 1

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

87°08'04", 165°44'58", 203°16'38" and 313°59'02"

Problem 2

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

N88°05'23"E, S23°56'23"E, S44°00'48"W, and N14°24'44"W

Problem 3

Compute the azimuth from north of line CD given the following information. Azimuths of AB are also from North.

Bearing AB = S23°08'24"W

<i>Angles to the right</i>	<i>ABC</i>	98°20'06"
	<i>BCD</i>	104°21'08"

Problem 4

Course AB of a five-sided traverse runs due north. Given the following balanced interior angles to the right, compute and tabulate the bearings and azimuths from north for each side of the traverse.

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
82°13'15"	116°35'18"	28°45'22"	195°16'28"	117°09'37"

Problem 5

Compute and tabulate the azimuths of the sides of a regular hexagon (polygon with six equal sides) given the following information:

$$\text{Bearing of } AB = 45^{\circ}04'20''$$

Station C is westerly of B

Problem 6

What magnetic bearing is needed to retrace a line for the following conditions:

<i>1875 Magnetic Bearing</i>	<i>1875 Declination</i>	<i>Present Declination</i>
<i>S69°20'E</i>	<i>14°20'W</i>	<i>12°30'W</i>