Key

Convert the following degrees, minutes, seconds to decimal degrees using the "long-hand method". ***SHOW YOUR WORK !!!***
(8 pts. each)

1) 75° 16' 43" = ***75.2786°***

2) 14° 03' 25" = ***14.0569°***

3) 167° 31' 15" = ***167.5208°***

Convert the following decimal degrees to degrees, minutes, seconds using the "long-hand method". ***SHOW YOUR WORK !!!***
(8 pts. each)

4) 325.8396° = ***325° 50' 22.56"***

5) 77.3952° = ***77° 23' 42.72"***

6) 259.0097° = ***259° 00' 34.92"***

Key

Find the average of angles repeated seven times in the field with the accumulated value shown. ***SHOW YOUR WORK !!!*** (8 pts.)

7) $\frac{261° 44' 09"}{7}$ = ***37° 23' 27.00"***

8) The following interior angles were observed in an eight-sided polygon. Determine the total of the angles (7 pts.) and the angular error of these field measured angles (7 pts.).

78° 27' 30"
151° 58' 17"
123° 29' 14"
98° 02' 49"
139° 17' 35"
333° 07' 52"
77° 22' 55"
78° 14' 59"

total = ***1080° 01' 11"*** error = ***+ 0° 01' 11"***

Key

9) Based on the sketch shown below (not to scale) solve for angle "X". All lines are straight. "AB" and "CD" are parallel. "EF" and "GH" are parallel. (20 pts.)

Angle "X" = ***58° 55' 20"***