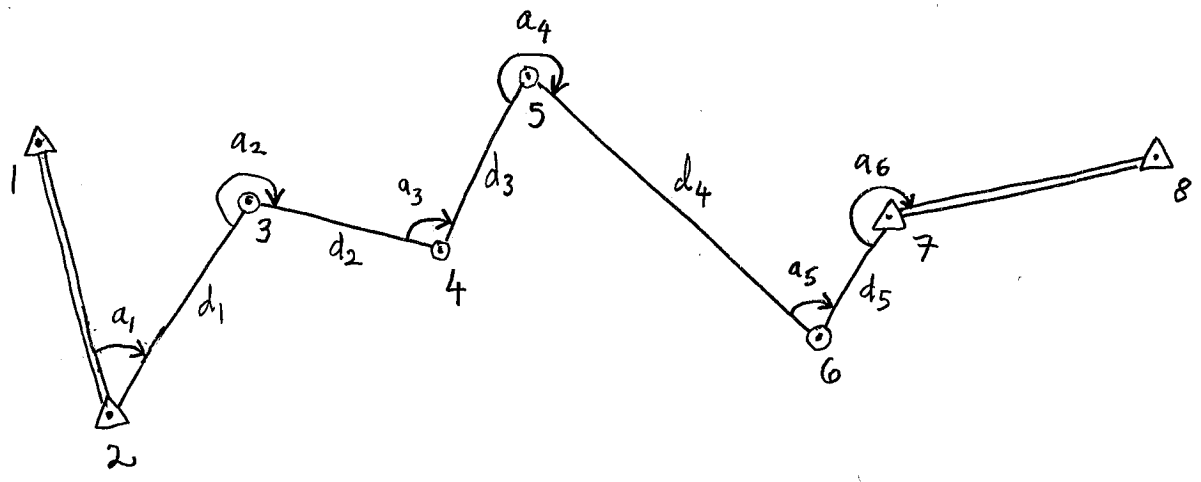
Adj. Geospa. Obs. **Homework 3** assigned 15 oct, due 22 oct



Adjust the observations for the given traverse by LS, indirect observations. Points 1, 2, 7, and 8 are fixed control points. Points 3, 4, 5, 6 are unknown. Control point coordinates and observations (with σ's) are given in the following tables.

#	x	y
1	1240.0	5560.0
2	1330.0	5200.0
7	2365.0	5460.0
8	2720.0	5550.0

#	obs	σ
a_1	47° 43′ 36.″3	10″
d_1	342.536 m	8mm + 3ppm
a_2	253° 00′ 26.″9	10″
d_2	260.993 m	8mm + 3ppm
a_3	99° 51′ 54.″5	10″
d_3	268.329 m	8mm + 3ppm
a_4	285° 18′ 01.″1	10″
d_4	516.975 m	8mm + 3ppm
a_5	78° 16′ 30.″8	10″
d_5	179.227 m	8mm + 3ppm
a_6	225° 38′ 01.″0	10″

(a) for at least the first iteration, show your approximations, B, W, and f. Show evidence of convergence.

(b) show angle residuals in arc seconds.

(c) In general, the residuals for this problem will be smaller than you might expect by looking at the σ's. Can you suggest why that is?