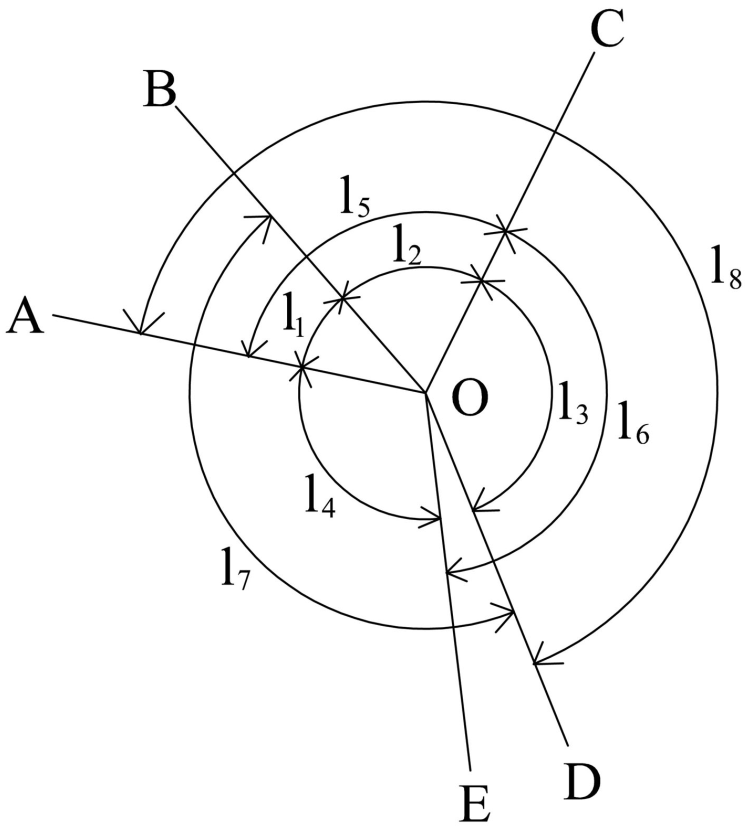
CE 506, Fall 2004, Homework 2, Assigned
Thursday 9 Sept, due Friday 17 Sept.

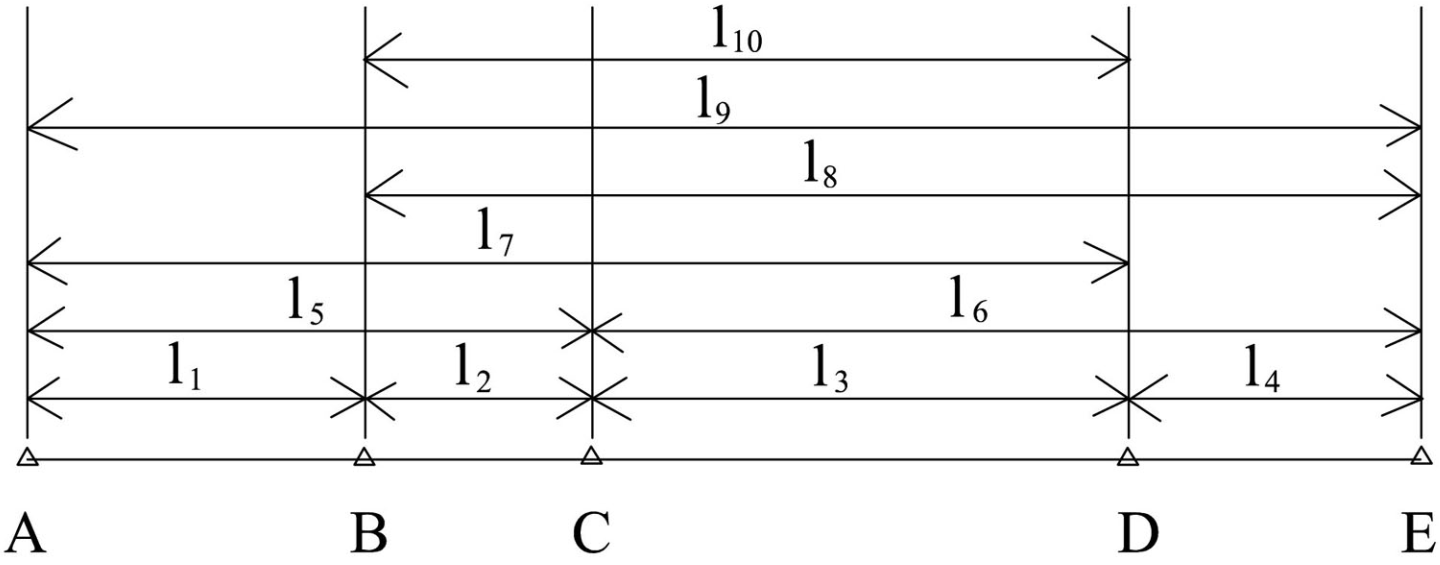
(1)



Num	Obs. Deg.
1	37
2	68
3	130
4	110
5	106
6	147
7	144
8	237

Adjust the angle figure by least squares using the method of indirect observations. The observations are of equal precision and uncorrelated. Angle EOD is fixed at 15.0 degrees.

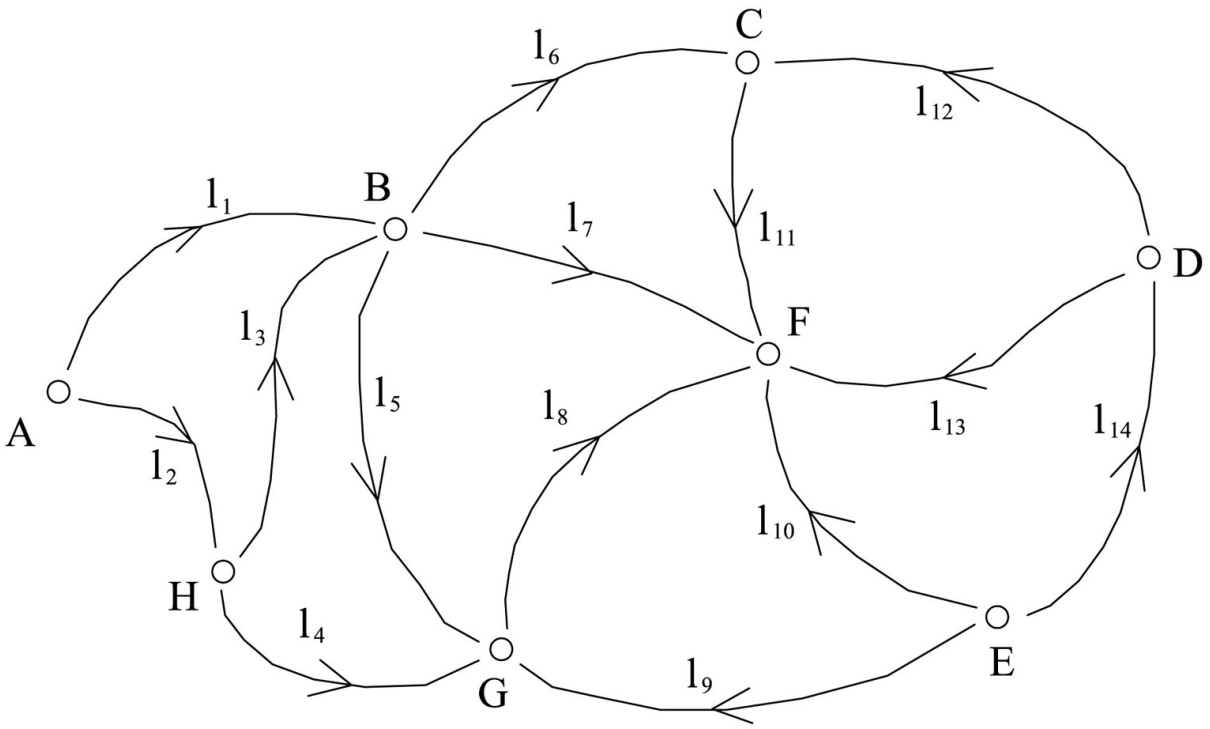
(2)



Num.	1	2	3	4	5	6	7	8	9	10
Obs. (m)	45.0	30.0	71.0	39.0	74.0	109.0	147.0	138.0	186.0	99.0
Sigma (m)	0.5	0.5	0.5	0.5	0.5	1.0	1.0	1.0	1.0	1.0

The model is 4 collinear distances. Adjust by least squares using the method of observations only. Use weights according to the given sigmas.

(3)



Num.	Obs. (cm)	Sigma (cm)
1	4.5	0.5
2	4.0	0.5
3	1.0	0.5
4	6.0	0.5
5	5.5	0.5
6	7.5	0.3
7	14.5	0.3
8	11.0	0.3
9	1.0	0.3
10	10.5	0.3
11	8.0	1.0
12	1.5	1.0
13	10.5	1.0
14	1.0	1.0

Adjust the level network by least squares using the method of observations only. Arrows point up hill as indicated by the observations. Use appropriate weights as indicated by the sigmas.