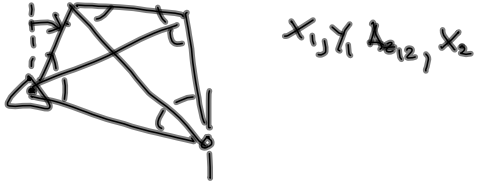
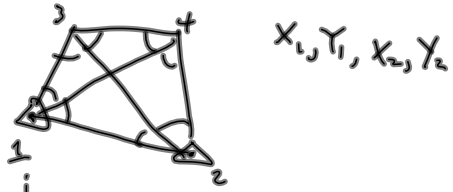


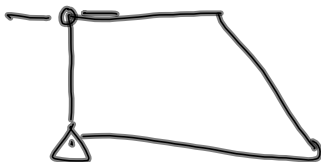
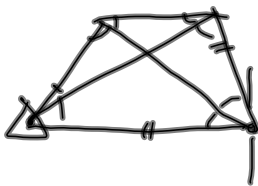
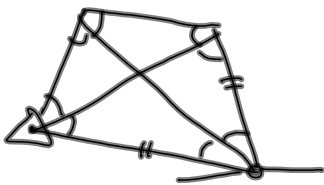
Lecture 19 Minimal Constraints 19-1



will not work  $y_1, y_2, y_3, y_4$

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Some networks # m.c. 3 19-2



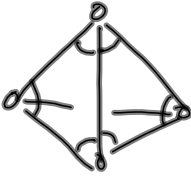
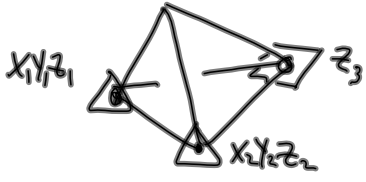
also fail

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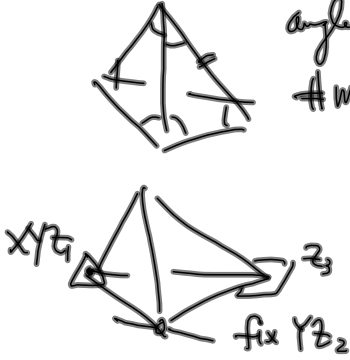
3D network (angle only) 19-3

#m.e. = 7

fix 3 shifts  
3 rotations  
side

angles + 1 distance  
#m.e. = 6



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Error Propagation 19-4

obs  

$$l_j, \Sigma_{ll} \rightarrow \underline{[LS]} \rightarrow X, \Sigma_{xx}$$

Monte Carlo Techniques  
 Random Number Generator

matlab: randn : generates random #'s  
 Standard normal distrib  
 $(\mu=0, \sigma=1)$ ,  
 rand generates uniform variates

$e = \text{randn}(m,n)$   
 $e = \text{randn}(n,1) * \sigma + \mu$

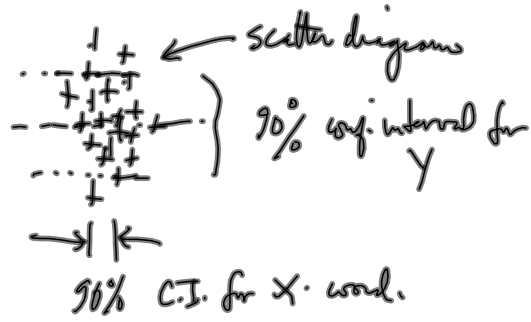
really not random numbers  
pseudo random numbers

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rng('shuffle')      different every time      19-5

rng(4)

rng(2)



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