

Attendance Quiz for Lecture 16

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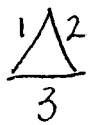
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1. What is the chromatic index of the complete graph  $K_n$ ? Prove it!

$$\chi'(K_n) = n \text{ if } n \text{ is odd}$$

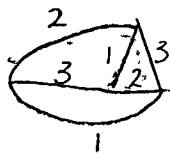
$$\chi'(K_n) = n-1 \text{ if } n \text{ is even}$$

Suppose  $n=3$ , then the graph



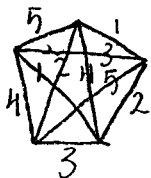
is 3-colorable (e). If we add a vertex to

this graph, we get



which is 3-colorable (e). If you add

another vertex we get



which is 5-colorable (e) and so on.