Slide 1

Mathematics for Computer Science
MIT 6.042J/18.062J

Tree coloring

Slide 2

unique paths

A tree is a graph with unique paths between every pair of vertices.

Slide 3

Chromatic Number

chromatic number, $\chi(G)$

lemma:

$$\chi(\text{tree}) = 2$$

Slide 4

Trees are 2-colorable
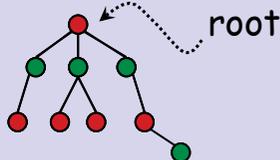
root

Pick any vertex as "root."
if (unique) path from root is
even length: 🔴
odd length: 🟢

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