Assignment 9 Part 2

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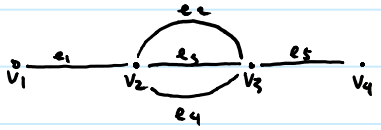
Tuesday, March 1, 2016 4:00 PM

10.2 -4 Consider the following graph



a How many paths are there from v_1 to v_4

3. Because v_2 has 3 paths

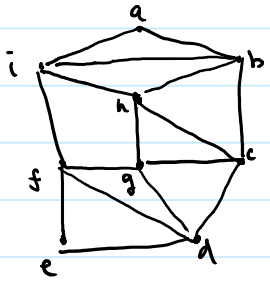
b How many trails are there from v_1 to v_4

9. There are 3 direct paths from v_1 to v_4. There are 3! ways at v_2. 3 to cross 2 to return and 1 final to cross again

c How many walks are there from v_1 to v_4

∞. Because walks allow both edge and vertex repetition

10.2 - 14 Determine if the graph is a Euler circuit



By definition a Euler circuit, every vertex must have a positive even degree

deg (a) = 2 deg (e) = 2 deg (i) = 4

deg (b) = 4 deg (f) = 4

deg (c) = 4 deg (g) = 4

deg (d) = 4 deg (h) = 4

Euler circuit = iabihbchgcdgfdefi