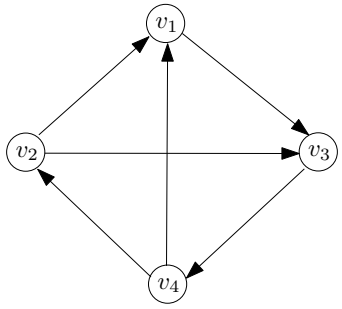
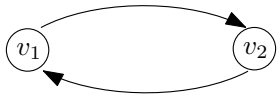
WST540: Exercise List 2

Problem 1. Consider the following graph:



Let v_2 be the starting vertex in Google's random surfing model. Give the probabilities that v_1, v_2, v_3 and v_4 are the second vertex visited, respectively (recall that re-seeding happens with probability 15% at each step).

Problem 2. Consider the following graph:



Let v_1 be the starting vertex in Google's random surfing model. Give the probabilities that v_1 and v_2 are the i-th vertex visited respectively, for $i = 2, 3, ..., 5$.

Problem 3*. What are the page ranks of v_1 and v_2 in the graph of Problem 2?