CS 173, Summer 19 Examlet 6

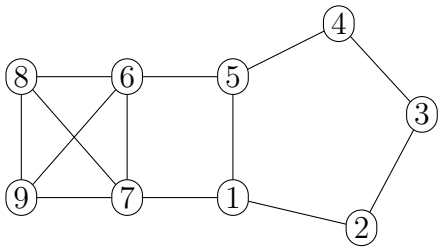
Name:_____

NetID:_____ **Lecture: A**

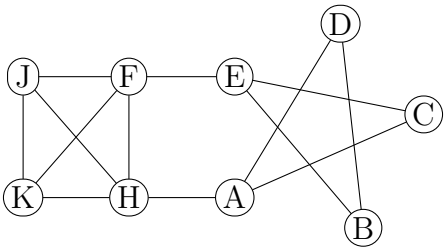
Discussion: Monday & Wednesday 1:30 2:30

1. (10 points) Are graphs X and Y (below) isomorphic? Justify your answer.

Graph X



Graph Y



2. (5 points) The degree sequence of a graph is the list of the degrees of all the nodes in the graph, arranged in numerical order, largest to smallest. Is it possible to construct a (simple) graph with degree sequence: 5, 3, 3, 2, 2, 1? Show how or briefly explain why this isn't possible.

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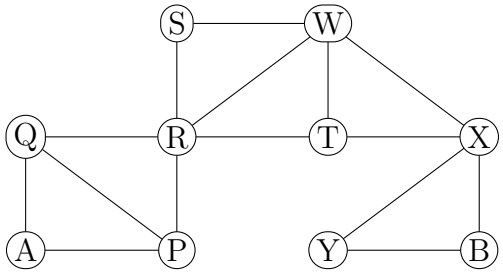
(9 points) How many paths are there from A to B in the graph below? Explain or show work.



(2 points) Does the above graph have a cut edge?

(2 points) How many connected components does the above graph have?

(2 points) What is the diameter of the above graph?